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Of Coase, Calabresi, and Optimal Tax Liability

Kyle D. Logue* Joel B. Slemrod†

*University of Michigan Law School, klogue@umich.edu

†University of Michigan Law School, jslemrod@umich.edu

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1. Introduction

In his 1960 paper "The Problem of Social Cost," Ronald Coase famously observed that, in a world with zero transactions costs, negotiation among interested parties can overcome the inefficiencies otherwise caused by externalities.[1] This is sometimes referred to as Coase's "efficiency proposition." Coase further argued that, in this frictionless world, the assignment of legal entitlements or obligations would not affect the ultimate allocation of resources, and therefore the efficiency of this allocation.[2] This is sometimes known as Coase's "invariance proposition."[3]

These two propositions collectively make up the so-called Coase Theorem. Thus, for example, in the absence of transaction costs, it is irrelevant whether we give a manufacturer the "right to pollute" or we give the adjoining property owner the "right to be free of pollution." Either way, the parties will agree to the same (efficient) amount of pollution. Coase also noted that the assignment of legal entitlements can have distributional consequences, despite the absence of transaction costs. Thus, although it makes no difference in terms of efficiency whether the polluter or the pollutee has the relevant legal entitlement, again assuming zero transaction costs, the assignment of the legal entitlement can make a big difference to the parties involved and can dramatically affect their relative wealth. We refer to this observation as the Coasean "distributional *variance* proposition."

Although Coase's original paper focused on a hypothetical world in which transaction costs were totally absent, Coase was well aware that in all real-world settings transaction costs are present and, in many settings, are high.[4] For this reason, the Coase Theorem is perhaps most influential for what it says about a world *with* transaction costs: that in such a world the assignment of legal entitlements (or the choice of legal rules) *can* affect overall efficiency.[5] Indeed, this re-statement of Coase's basic point can reasonably be understood as the conceptual foundation of the entire law-and-economics movement, which has risen to prominence within the American legal academy over the past several decades. Most law-and-economics scholarship in the fields of torts, property, and contract law can be seen as attempting to assess whether existing legal rules are efficient or to ascertain the most efficient legal rule for a given situation, given the existence of transaction costs.

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[1] Ronald H. Coase, *The Problem of Social Cost*, 3 J. L. & ECON. 1 (1960).
[2] Steve G. Medema & Richard O. Zerbe, Jr., *The Coase Theorem, in* ENCYCLOPEDIA OF LAW AND ECONOMICS, VOLUME I. THE HISTORY AND METHODOLOGY OF LAW AND ECONOMICS 839 (Boudewijn Bouckaert, and Gerrit De Geest, eds.) (2000), available on line at http://users.ugent.be/~gdegeest/0730book.pdf.
[3] *Id*. at 840.
[4] RONALD H. COASE, THE FIRM, THE MARKET, AND THE LAW 174 (1988) ("The world of zero transaction costs has often been described as a Coasian world. Nothing could be further from the truth.").
[5] A. MITCHELL POLINSKY, AN INTRODUCTION TO LAW AND ECONOMICS 15 (3rd ed. 2003)

One famous example of this sort of scholarship would be the work of Guido Calabresi in tort law. In his seminal book, "The Cost of Accidents: A Legal and Economic Analysis," Calabresi concluded that, assuming transaction costs prevent a Coasean result, the optimal tort liability regime is one that minimizes the sum of the cost of accidents and the cost of avoiding accidents, including the administrative costs of the tort system. Calabresi concluded that such a regime will sometimes call for assigning tort liability to the "cheapest cost avoider" – that is, to the party able to minimize negative externalities (or third-party harms) most efficiently. We refer to this party as the cheapest-cost or least-cost *harm* avoider.[6]

Unbeknownst to most lawyers, but well known to economists, there is a theorem within the economic analysis of taxation that is, on its face, strikingly similar to the Coase Theorem. This notion, dubbed the "theorem of the invariance of tax incidence" by economist Hugh Dalton in the 1950s, has been present in the public finance literature for decades.[7] Although this theorem is rarely stated formally, the informal version goes something like this: The incidence of a tax imposed on the sale or purchase of a good or service will be independent of the assignment of the legal obligation to remit the tax to the government.[8] That is to say, it does not matter if the obligation to remit the tax is imposed on the seller or the purchaser of a good or service: the result will be the same. By "obligation to remit" we mean the obligation imposed by law on a private party to transfer funds in satisfaction of a particular legal liability. (As we discuss more fully below, a precise statement of the Coase Theorem also requires the use of the concept of remittance.) As with the Coase Theorem, the tax remittance invariance conclusion depends on a number of assumptions, although in the tax remittance case the assumptions have largely been implicit. Because this version of the tax remittance invariance idea is about incidence, we will refer to it as the "Tax Remittance Invariance Proposition—Incidence," or TRIPI for short.

The reasoning underlying the tax remittance idea also implies a parallel efficiency (or inefficiency) proposition. That is, under standard competitive-market assumptions, the allocation of resources — and therefore the welfare costs of a tax — do not depend on who (as between the two parties to the transaction) is required to remit the tax to the government. We call this the "Tax Remittance Invariance Proposition—Efficiency" (or TRIPE).

In contrast to the vast literature expanding on the Coase Theorem – exploring its implications for various areas of private law (including torts) and investigating its underlying assumptions[9] – little scholarly attention has been directed at understanding the key assumptions underlying the tax law invariance ideas.[10] What is even more puzzling is that, despite the general acceptance of the tax remittance invariance propositions within

[6] GUIDO CALABRESI, THE COST OF ACCIDENTS: A LEGAL AND ECONOMIC ANALYSIS (1970).
[7] HUGH DALTON, PRINCIPLES OF PUBLIC FINANCE (1954).
[8] *See, e.g.*, HARVEY S. ROSEN & TED GAYER, PUBLIC FINANCE (8th ed. 2008); JOSEPH E. STIGLITZ, ECONOMICS OF THE PUBLIC SECTOR (3rd ed. 2000).
[9] Some of this literature is cited and summarized in Medem & Zerbe, *supra* note __ and in David De Meza, *Coase Theorem*, in 1 THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND LAW 270 (Peter Newman, ed.) (1998).
[10] One exception is Joel Slemrod, *Does It Matter Who Writes the Check to the Government? The Economics of Tax Remittance*. 61 NAT. TAX J. 251 (2008).

the public finance literature and the canonical status of the Coase theorem within the law-and-economics literature, the obvious parallels, and somewhat less obvious differences, between Coase and the TRIPs have gone completely unanalyzed. In this article, using examples from tort law as our primary analytical lens, we aim to fill these gaps in the literature. In addition, we explore the generality or lack of generality of the tax remittance propositions by incorporating some of the insights of the Coase literature; and we examine the extent to which the tax remittance invariance propositions depend on their underlying assumptions, just as is the case with the Coase Theorem.

One contribution of the Article to the Coase literature is to emphasize the importance of the distinction between two general types of situations: those in which the parties in question – the ones whose activities are jointly causing an external harm or cost – are in a contractual or market (i.e., buyer/seller) relationship with each other and those in which they are not. Furthermore, we show how the same distinction matters in the tax context.[11] Thus, we explain how Coase's distributional variance proposition applies only in non-market settings, such as those involving conflicting land uses, as in the classic case of the farmer and the rancher. In market settings, however, a sort of distributional invariance proposition will hold. That is, regardless of which party is assigned the obligation to remit a given cost, the actual burden of that cost remittance obligation will depend on the relative elasticities of supply and demand for whatever good or service is the subject of the contractual relationship and the origin of the incurred cost.[12] In the economics literature, of course, a version of the same point exists with respect to taxes (rather than harms) that are triggered by transactions; we gave it the name TRIPI above.

The primary normative conclusion that emerges from this Article's blending of torts and tax can be summarized as follows: Parallel with Calabresi's canonical formulation for the design of an optimal tort system, an optimal tax remittance regime requires that tax liabilities be assigned so as to minimize the overall social costs of compliance and administration, for a given level of achievement of the tax law's desired distributional and revenue goals. By compliance costs we mean the private costs to the parties (and therefore the social costs) of complying with the law. By administrative costs, we mean the non-private social costs of enforcing compliance with the law.[13] As is true with the administration of the civil liability system, the overall compliance and administrative costs of a tax system will sometimes differ dramatically depending on which party or class of parties (e.g., employers versus employees; consumers versus retail businesses) is saddled with the legal obligation to transfer the tax monies to the government. Thus, optimal tax policy may in some situations call for assigning the tax remittance obligation

[11] With any market purchase of goods or services, even in a spot market, there will be some sort of explicit or implicit contract. For that reason, we use the terms "market setting" and "contractual setting" synonymously.

[12] Richard Craswell ably demonstrates this point. Richard Craswell, *Passing on the Costs of Legal Rules: Efficiency and Distribution in Buyer-Seller Relationships*, 43 STAN. L. REV. 361 (1990). Craswell's article focuses on the contractual relationship between injurers and victims (such as product manufacturers and product consumers). Our analysis focuses on situations in which two or more parties are collaborating in some activity that causes harm to a third party.

[13] We do not regard fines that are imposed as part of an enforcement regime as social costs, since fines are *transfers* of resources from one party to another. However, the costs of administering and enforcing a system of fines we do regard as real social costs.

to the lowest-compliance-cost tax remitter – that is, the party with the lowest private compliance costs per dollar of tax remitted. By contrast, it will sometimes be optimal to assign the remittance obligation to the party for whom the administrative (or enforcement) cost per dollar of tax revenue raised is lowest – or the lowest-administrative-cost tax remitter. For one example, if the remittance obligation is assigned to a party who is innately dishonest (someone who has not internalized the norm of tax law compliance) and who is engaged in a business that provides numerous low-cost opportunities for evasion, then either much of the tax will go uncollected (if we imagine a fixed IRS enforcement budget) or the cost of collection for the government will be much higher than if the remittance obligation were imposed on an inherently compliant (well socialized) party.[14]

For the same reasons, the government will want to avoid placing the remittance obligation on the lowest-cost *liability* avoider; that is, the party who can mostly cheaply (in terms of private costs) avoid enforcement of the tort or tax law. This would be the party for whom it is *most* administratively expensive for the government to make comply. What this implies is that, contrary to the naïve interpretation of the Coase Theorem and of TRIPs (but consistent with the Calabresian notion of the least-cost harm avoider), overall social welfare will be maximized only if the tax planning authority takes into account the relative compliance and administrative costs in assigning tax remittance obligations.

One can distinguish between the obligation to remit a tax – to transfer resources to the government – and the obligation to report or inform the government about a tax liability. An example of the former is the obligation placed on employers to remit withholding taxes on employees' wages. An example of the latter is the employers' obligation to submit W-2 forms to the IRS detailing the amount of wages paid to employees. As we discuss further below, both of these obligations are important to tax enforcement, although we emphasize remittance. Tax-remittance and information-reporting obligations usually go together (that is, a party with a remittance obligation usually also has an information reporting obligation—at least insofar as the act of remitting itself is a type of information reporting); however, the link between remittance and reporting is not logically necessary and could in theory be split up. We discuss this possibility below.

The Article proceeds as follows. Section 2 offers a primer on the Coase Theorem, beginning with the classic case of neighbor externalizing on neighbor (farmer and rancher), and it explains the basic invariance propositions. Section 3 shifts the focus to Coasean situations involving buyers and sellers in a market or contractual relationship, buyers and sellers whose market interactions cause harm to third parties. Using supply-and-demand diagrams, we illustrate (in a new way) some of the most basic findings of the economic analysis of law, including both the Coasean invariance and efficiency propositions and the Calabresian least-cost avoider idea. Also in section 3 we make an efficiency argument for vicarious employer liability for employee torts and suggest this doctrine could in theory be expanded in certain situations to (a) independent contractors and (b) torts beyond the scope of employment. Our analysis builds on the standard law-

[14] Of course, an individual's willingness to comply voluntarily with the law, in the absence of a threat of external punishment, is not necessarily an inherent trait. Society actually spends resources to inculcate such values. For purposes of this article, however, we ignore the social costs of instilling in individuals the willingness to comply in the absence of a threat of external punishment.

and-economics analysis of vicarious liability, but emphasizes the need to minimize not only the costs of third-party harms but also administrative costs.

Section 4 then moves from torts to tax – specifically, to taxes triggered by buyer/seller market relationships, such as employer/employee interactions. The section uses supply-and-demand curves to illustrate the tax remittance invariance propositions in their classic form, as found in every public finance textbook, under the assumptions of zero (or symmetrical) compliance and administrative costs. Section 4 then uses those same diagrams to explain how the invariance propositions no longer apply under the more realistic assumptions of asymmetric compliance and administrative costs. More specifically, we show that the optimal assignment of tax remittance responsibility (as between buyer and seller) turns on which assignment minimizes the sum of compliance and administrative costs incurred to raise a given amount of revenue. We argue that, in general, the least-overall-cost tax remitter, for taxes triggered by buyer/seller transactions, will be the larger, wealthier party – both because there are economies of scale to enforcement against large tax remitter and because wealthier taxpayers are less likely to be judgment proof.

Section 5 discusses some of the real-world implications of our analysis, both normative and positive. As a positive matter, our analysis provides an explanation for why the U.S. income tax system and most other income tax systems require employers to remit the bulk of their employee's personal income tax liabilities. Likewise, our analysis explains why the remittance obligation for sales taxes is usually imposed on sellers rather than buyers. In addition, our framework explains why tax remittance obligations are generally made mandatory (or non-transferable) in the sense that Coasean bargaining over the tax remittance obligation is not permitted. Finally, our analysis also helps to explain why the remittance obligation for the gift tax is imposed, initially, on the donor and, secondarily, on the donee.

In addition to providing a way of understanding current tax law, our framework also suggests some possible reforms of existing tax enforcement policy. For example, we argue for, under certain conditions, expanding employers' tax remittance obligation to include payments to independent contractors, as employers in those situations are more likely to be the least-cost remitters – both in terms of compliance and administrative costs. In other words, the existing distinction between employees and independent contractors, which may be optimal for tort law purposes, may not be optimally drawn for tax remittance purposes. In addition, we explore the possibility of expanding the role of employers as remitters for their employees' (and contractors') tax liabilities even for income earned outside of the employment (or contractual) relationship. We also point out that current withholding rules with respect to tip income of employees in service businesses (especially in restaurants) could be strengthened to exploit the cheapest-cost remitter idea. With the tipping example, we also explore further the distinction between remittance and reporting and why the latter is not always a substitute for the former.

Also in this section we suggest generally that remittance responsibility for business or corporate remitters should be tied to the size of the remitter; that is, the larger the firm (in terms of gross revenue, profits, or assets), the stronger the argument for expanding their compulsory remittance responsibility. Moving beyond income taxes, our analysis explains why, under certain conditions, it will be more efficient to impose *in rem* tax

liability for property taxes (where the remittance obligation is imposed, in effect, on a piece of property rather than on a person) rather than standard *in personam* liability and why non-standard withholding regimes, including so-called "reverse withholding," under which remittance responsibility is triggered by any commercial interaction with difficult-to-tax parties, can achieve the desired level and distribution of tax collection at the lowest possible overall cost.

We conclude by considering some qualifications to our analysis, including behavioral, political economy, and transition issues. One qualification deserves a mention at the outset: Our analysis ignores international, or more generally cross-jurisdictional, issues. That is, we assume that all of the relevant parties, all of the parties to whom the tax (or, for that matter, tort) remittance obligation might conceivably be assigned are within the relevant jurisdiction. As our analysis shows the importance of the assignment of remittance responsibility, the existence of jurisdictional borders beyond which remittance responsibility may not be assigned is a serious complication. Moreover, the possibility of parties avoiding remittance responsibility by locating outside of the relevant jurisdiction obviously presents a serious problem for any regime of tax (or tort) enforcement.

2. A Primer on Coase: Farmers, Ranchers, and Other "Neighbors"

The Coase Theorem makes what now seems like an obvious point: in a world with zero transaction costs, the initial assignment of a legal right or entitlement will not affect the allocation of resources, because the affected parties will always bargain to the efficient result, so long as everyone involved is rational (in the way that economists normally mean that term) and the entitlement in question is alienable (that is, the entitlement can be transferred). Before exploring this conclusion, it will be useful to clarify what is meant by the term "legal entitlement" in this context. In general, the Coasean logic has been applied to situations in which the action of one party causes some harm or imposes some cost on another party – the classic negative externality.[15] The *entitlement* at issue, then, is the right to avoid negative consequences of the action: either the right of "the injurer" to impose the cost on others or the right of "the victim" to prevent the harm or to insist on compensation for it.[16]

The quintessential example of the Coase Theorem in action, from Coase himself, involves conflicting land uses, specifically neighboring landowners, a cattle rancher and a corn farmer. The Coasean question, then, is who, as between the farmer and the rancher, should be legally responsible for the crop damage caused when the rancher's cows

[15] Of course, a symmetrical Coasean story can be told for positive externalities, where the externality is not a cost or harm but some benefit that is bestowed unintentionally by one party on another. In those settings too, if transaction costs are zero, people are rational, and entitlements are freely tradable, parties will bargain to the efficient result. Following the literature, we tend to focus on negative externalities.

[16] If the victim (the party who suffers the harm in the first instance) is given the entitlement to be free from harm, a second issue is what sort of rule would be used to protect that entitlement: a property rule or a liability rule. Guido Calabresi & Douglas A. Melamed, *Property Rules, Liability Rules and Inalienability: One View of the Cathedral*, 85 Harv. L.Rev, 1089 (1972). If the entitlement is protected by a property rule, then the victim has the legal right to get an injunction to stop the harm-causing activity in question. If it is protected by a liability rule, then the victim's legal remedies are limited to an ex post suit for damages.

happen to trespass on the farmer's property and damage his corn. Or, put in terms of this Article's framework, who should be assigned the *remittance obligation* with respect to the crop damage caused by any cattle that stray onto the farmer's property. If the rancher is legally required to *remit* to the farmer an amount of money equal to his corn damage, we would say that the entitlement rests with the farmer and the remittance obligation with the rancher. And if the rancher is not required to remit the money for any harm caused by his straying cows on the farmer's property, we would say that the remittance obligation rests with the farmer (and the legal entitlement with the rancher).[17]

What Coase demonstrated was that, in a frictionless world, it does not matter (from an efficiency perspective) how the legal entitlement (or remittance obligation) is assigned. The efficient, joint-wealth-maximizing outcomes – will eventually be reached through a process that is now sometimes referred to as "Coasean bargaining." If it is efficient to produce corn but not cattle on two adjoining pieces of property, or the reverse, the neighboring landowners will bargain to that result.[18] And they will do so whether the entitlement is placed with the farmer or with the rancher. If efficiency calls for both corn and cattle to be produced but for a fence to be erected between the two properties, then that is what will happen, and it will happen in the most efficient way possible, with the parties agreeing that the best fence builder should do the job.[19] This is Calabresi's

[17] Of course, however the remittance obligation for the costs of damaged corn is allocated between farmer and rancher, the actual economic burden of this obligation may then be "passed on" to the farmer's employees or customers, or to those of the ranchers, depending on, among other things, the relative elasticities of relevant supply and demand in those markets. This is unlikely to occur, though, if the legal assignment and subsequent bargains apply to just one rancher and farmer, as the prices of the commodities will be set in a much larger market. We have more to say about this sort of cost pass-through below.

[18] For example, imagine that the lost profit to the farmer of not being able to grow and sell his corn (should the rancher next door be given the entitlement to ignore the damage caused by his cattle) would be $100; and the cost to the rancher of not being able to have cattle would be $150 in lost profit. In that simple case, if the social planner were to give the entitlement initially to the rancher, the rancher would indeed decide to have cattle, letting them roam the countryside, and would make $150 of profit; and the farmer, anticipating the rancher's behavior (and the potential damage to his crops), would opt not to plant corn and would thereby lose $100 of potential corn profit. So we would have cattle but not corn from these two landowners, and this, on the facts, would be the efficient result as it maximizes the joint benefit to the parties of their uses of their land net of costs.

[19] Imagine that in the previous example the farmer could for $75 build a fence that would make it possible for both the farmer to have his corn and the rancher to have her cattle but, for whatever reason, the rancher's cost of building a fence was much higher—say, $200. Obviously, the parties under the Coasean assumptions would agree to have the farmer build the fence, and this would happen regardless of the initial assignment of entitlements. (In our example, so long as a fully effective fence could be built for less than $250 (the total combined profit of farming and ranching), then the fence would be built.) This conclusion follows from the fact that having the farmer build the fence would produce the highest joint value from the two properties. ($150 cattle profit + $100 corn profit - $75 fence cost = $175.) In Calabresi's famous phrasing, the farmer in this situation would be the "cheapest cost avoider" and would therefore, under Coasean assumptions, end up with the responsibility for building the fence. In this Article we use the term cheapest-cost or least-cost harm avoider in cases where the private costs are also social costs; we use the term cheapest- or least-cost liability avoiders in cases where the private costs are not social costs or, in particular, when the private benefits of tax avoidance do not correspond to social benefits, This is just another way of illustrating that, in the absence of transaction costs, the parties will internalize all external costs and will therefore take all cost-justified measures to reduce those costs. And the same bargaining that will assign the entitlement to the party with the highest-valued use will also ensure that the party who is best able to reduce the size of the negative externality (the cheapest-cost harm avoider) will do so. It is all part of the Coasean bargain.

cheapest-cost harm avoider idea, and the law can achieve this result in a Coasean world simply by setting the initial legal entitlements one way or the other and letting the parties negotiate. The same analysis can be applied to any negative externality: pollution, automobile accidents, whatever.[20] As long as transaction costs are assumed to be zero (and everyone is rational), all affected parties will take part in the Coasean bargaining process; all externalities will be internalized. There will be the "right," or social-welfare-maximizing amount of the activity and all cost-justified investments in cost reduction will be made. In the torts literature, these latter two effects are known as *activity-level effects* and the *care-level effects*.[21]

Numerous criticisms of the Coase Theorem have been advanced over the years, both of the efficiency proposition and the invariance proposition. Some scholars, for example, have pointed out that invariance will not hold when there is a divergence between the amount a party is "willing to pay" (WTP) to acquire an entitlement and the amount he is "willing to accept" (WTA) to give up the same entitlement, due perhaps to the kind of endowment effect discussed in prospect theory.[22] This kind of effect has been confirmed in empirical studies, and it can lead to invariance of outcomes – though not to inefficiency, assuming a world of zero transaction costs. In addition to the WTP/WTA critique, there are game-theoretic objections to both the invariance and the efficiency propositions. Many of the paradigmatic examples of Coasean bargaining involve situations that could give rise to strategic behavior by the parties, which may lead to a result that is not joint-wealth-maximizing. For example, if the interactions between the parties are modeled as a non-cooperative game with asymmetric information, strategic behavior of various sorts may prevent an efficient outcome.[23] This is sometimes referred to as the bargaining problem or the problem of bilateral monopoly. Some commentators argue that the bilateral monopoly critique fails to take seriously the zero-transaction cost assumption, which includes an assumption of perfect information on both sides (including information about the payoffs to each side of all possible outcomes). Under those assumptions, bargaining failures would not occur. But even so, it can hardly be denied that in many real-world settings between two (or relatively few) bargaining parties some value-maximizing outcomes are not achieved, either because of transaction costs (conventionally understood) or by strategic behavior; and the relevance of the Coase Theorem to those situations can reasonably be questioned.

Notably the traditional Coasean bargaining situation involves conflicting land uses in which there is no prior contractual relationship between the two parties. The injurer and the victim are not in a contractual seller-buyer relationship with each other. Rather, they are *just* neighbors; and their separate activities happen to conflict in the sense that, because the activities take place in close proximity to each other, a particular external cost arises, the remittance obligation for which needs to be assigned, explicitly or implicitly. The same would be true for the property owner whose manufacturing business pollutes the neighbors' air or water; in that case, the pollution would not arise

[20] *See, e.g.*, Polinsky, *supra* note __.
[21] STEVEN SHAVELL, ECONOMIC ANALYSIS OF ACCIDENT LAW (1987).
[22] *See., e.g.*, Herbert J. Hovenkamp, *Marginal Utility and the Coase Theorem*, 75 CORNELL L. REV. 783 (1990).
[23] Donald H. Regan, *The Problem of Social Cost Revisited*, 15 J. L. & ECON. 427 (1972).

out of the transaction between the manufacturer and its consumer/neighbors, but is unrelated to any such transaction.

There are two interesting implications from this non-contractual setting. First, unlike a competitive market where the market price is set by the intersection of supply and demand, in a classic Coasean conflicting-land-use situation the distribution of the gains from trade is determined by bargaining between the parties. Thus, assuming some sort of bargain is reached (and the bilateral monopoly problem overcome), the distribution of the gains from trade will depend on the parties' relative bargaining positions.[24] The other interesting implication of the standard Coasean non-contractual setting is that, precisely because these are bargaining situations, the assignment of the legal entitlement to one side or the other will have distributional consequences. We have called this insight the Coasean distributional variance proposition.[25] The point is that having the legal right to impose costs onto your neighbor, or the legal right to prevent your neighbor from imposing costs onto you, is itself a distinct and valuable asset. Thus, if the rule has always has been that ranchers are entitled to let their cattle roam the countryside, switching the entitlement to farmers would cause a drop in the value of the affected ranches relative to the affected farms. In effect, one of the costs of farming would have disappeared and reappeared as a cost of ranching. Such a change in legal rules would be akin to a lump-sum transfer from farmers to ranchers. The same analysis could be applied to the example of the polluting manufacturer. If manufacturers suddenly become responsible for the pollution they impose on their neighbors, the manufacturing business would then be less profitable and precisely by the amount of the expected value of the cost of pollution or pollution abatement. Likewise, the value of owning a car is somewhat less if the owner has to pay for injuries to pedestrians than if he does not.

These distributional consequences are diminished to the extent the affected assets of the parties are costlessly convertible to another equally profitable use or, conversely, that free entry into an industry dissipates the long-run gain in profits that would otherwise accrue to those already in business.[26] Moreover, to the extent the harm in question can be prevented with a trivial investment on the part of either party, the distributional consequences of the assignment will be similarly trivial. For example, in the extreme case, if ranch land could just as easily be used for farming (say the land is equally profitable put to either use such that the choice to farm or ranch was virtually a matter of indifference to the landowner), and assuming zero costs of converting from one to the other, there would be no distributional effect of altering the entitlement at issue. When the rule changes and ranchers were required to corral their cattle or pay for the damage

[24] Continuing with our example of the farmer and rancher who are neighbors (and whose land uses are incompatible), imagine what would happen in a Coasean world if the "entitlement" not to remit is given to the farmer. Given that the rancher can make $150 ranching, and the farmer only $100 farming, the rancher will presumably pay the farmer to purchase his entitlement – that is, pay him to remit. Thus, the efficient outcome would be achieved. However, the precise amount the rancher would end up paying the farmer is impossible to determine ex ante. It would fall somewhere between $100 and $150, with the exact amount depending on the relative bargaining power of the two parties.

[25] As we discuss below, the Coasean distributional variance proposition does not apply in competitive market settings where the harm (or the tax) in question arises out of a contractual market transaction.

[26] This argument would not apply if the change in entitlement applied to just one adjacent farmer and rancher pair; in this case it would be capitalized into the value of one or the other ongoing concerns.

caused, the rancher could simply switch to farming. Of course, if ranchland is not costlessly convertible to farmland or if the farmer has made ranching-specific investments in livestock or equipment, then a change in the rule will affect the value of the rancher's assets. The same would be true on the farmer side of things, as the value of farming-specific investments would presumably rise. We could tell the same story in the other direction, with farmers losing value and ranchers gaining; or we could substitute any other example of a negative externality for that the rancher/farmer scenario. Hence, if a polluter could cheaply make some change in their operations that would eliminate the resulting pollutants, then the polluter's entitlement to impose costs on its neighbor would not be worth very much. And so on. Of course, notwithstanding this caveat, there will be substantial activity-specific investments on one side or the other in many situations such that distributional variance in these types of situations is a nontrivial possibility.

3. The Market Setting: Sellers, Buyers, and Injured Third Parties

a. Efficiency and Distributive Invariance: Assuming Zero (or Homogeneous) Compliance and Administrative Costs

To move the analysis one step closer to our analogy between torts and tax, let us shift from the non-market "neighbor" setting to the long-run equilibrium of a market setting involving numerous buyers and sellers transacting over a homogeneous product in which no buyer or seller has market power.[27] Thus, imagine that there are two classes of parties who are buyers and sellers with respect to each other; and suppose further that the production or consumption of the good or service sometimes harm third parties. For example, the sellers could be makers of component parts that are sold to buyers who use those parts to manufacture a final product, which is then sold to retail customers -- some of whom end up being injured by the product. Alternatively, the sellers could be manufacturers of products that are sold to consumers who sometimes use the products in ways that injure third parties. For the purpose of illustration, we will for now presume that the market in question is a labor market and that the buyers are employers and the sellers are workers. The problem, then, is that these labor market transactions not only produce value for the parties involved (in terms of wages paid for services received and employer business profits), they also sometimes cause external harms to third parties.[28] Suppose for now that these harms arise within the workers' "scope of employment," in the sense that the harm can reasonably be said to be in connection with the job that the worker is doing for the employer. Imagine also that transactions costs between employers and workers are relatively low; that is, because we have a competitive labor market here, we assume that employers and workers reach joint-wealth-maximizing employment contracts. We also assume, however, that the third-party victims are not part of this competitive labor market and that transaction costs prevent them from engaging in

[27] Although these competitive market assumptions are useful for purposes of illustration, as they allow us to construct simple supply and demand curves to demonstrate our basic points of efficiency and distributional invariance, these assumptions are not necessary to produce the invariance results.

[28] Below we draw an analogy between these harms caused to third parties and taxes owed to the government.

Coasean bargaining with either the employers or workers whose interaction generates the harm. The third parties can do nothing to reduce this expected harm. Either employers or the worker can take steps to reduce or eliminate the expected harm that their joint actions impose on third parties, but that neither is a "cheaper-cost harm avoider" than the other; that is, the cost to either of them per amount of reduction in expected harm is the same. In addition, we ignore the consequences of the harm to the third parties, as we are focusing only on the deterrence or cost internalization function of liability law.[29] Finally, assume that the administrative costs associated with employer or worker liability are equal. (We have more to say on this assumption below.)

Now we have a classic negative externality, and the relevant policy question is to whom we should assign the remittance responsibility for this third-party harm: the workers (the sellers of labor) or the employers (the buyers of labor).[30] To answer these questions, we depict our hypothesized labor market in a series of standard supply-and-demand diagrams. We start with the long-run equilibrium condition prior to the discovery that the buyer/seller transactions are causing harm to third parties. This market is described in Figure 1.

[29] This approach can be justified if we imagine that all third-party victims are insured directly for these harms through first-party insurance policies and can recover directly from their insurers for the harm. In that case, the tort actions that shift these costs either to buyers or sellers of the product or service that caused the third-party harm would be brought in the form of subrogation suits by the first-party insurance companies.

[30] Notice that we do not consider imposing the cost on the third-party victim. This is because we have assumed that either employers or employees could efficiently reduce or eliminate the expected harm, but that the third parties could do nothing to affect the expected harm. Also, an implicit assumption here is that the only available regulatory response is *ex post* liability for harm. In fact, as we discuss below, *ex ante* regulation is also an option; however, it is likely to be very costly, a fact that will obviously have implications for the choice of the optimal legal response to the externality. We return to this assumption below.

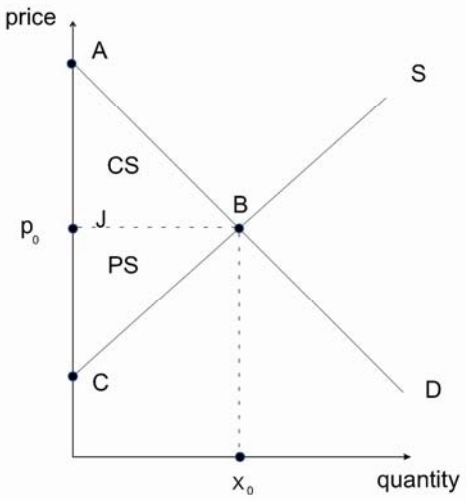

Figure 1

The aggregate demand curve in Figure 1, labeled D, shows for each price (or wage) the total quantity of units of labor that would be demanded by employers. The aggregate supply curve, labeled S, shows the aggregate quantity of units of labor supplied by employees at any given price. The equilibrium price is p_0, because only at that price will supply equal demand, and therefore will there be no upward or downward pressure on the wage. At the equilibrium, x_0 units of labor will be provided by workers. The areas denoted by triangles CS and PS represent employer surplus and employee surplus, respectively, which is the total dollar value attributable to the ability to provide labor at the equilibrium wage and quantity.

Now suppose that it is discovered that the particular activity that the employees are engaged in on behalf of the employer will on occasion cause harm to third parties. The question then is whether that tort liability (the legal obligation to remit the tort damages to the injured plaintiffs) should be assigned in general to employers or to the employees – and whether it matters. Put in classic Coasean terms: what difference does the assignment of this entitlement/obligation make if we assume zero transaction costs (as between employer and employee), full rationality, and free transferability of legal entitlements? The answer is none, not even a distributional difference. This is because, given the Coasean assumptions, market forces will in the long run push employers and workers to reach the efficient result. What's more, because of the price nexus here between employers and workers, the way in which this new external cost will be borne by the parties will depend entirely on the elasticities of supply and demand for the workers' labor and not at all on the initial assignment of the legal entitlement, i.e., the remittance obligation.

To illustrate this basic point, we add to our model a new cost, which we assume, for now, is equal to c per unit of labor sold no matter whether employers or workers are held liable. This assumption is built on two sub-assumptions. One, it entails an assumption that the cost rises proportionally with the aggregate amount of the good or service sold and consumed (here, labor). This assumption implies that the cost can be represented by either a parallel shift in the supply or demand curve in the figures below. Two, it entails the assumption discussed above that neither employers nor workers are cheaper-cost harm avoiders than the other. That the per-unit cost of liability is c, whether employers or workers are assigned remittance responsibility, also implies that employers and workers have the same risk preferences or the same costs of purchasing liability insurance. With these new assumptions, Figure 2 depicts the situation in which the obligation to remit the cost of third-party injuries is assigned to workers, the suppliers of labor.

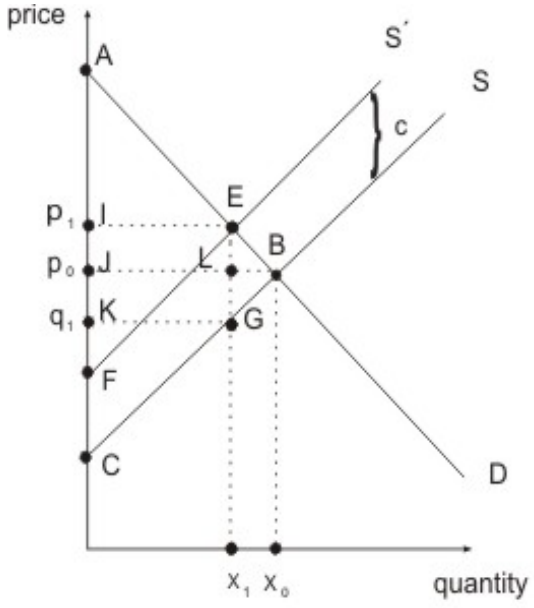

Figure 2

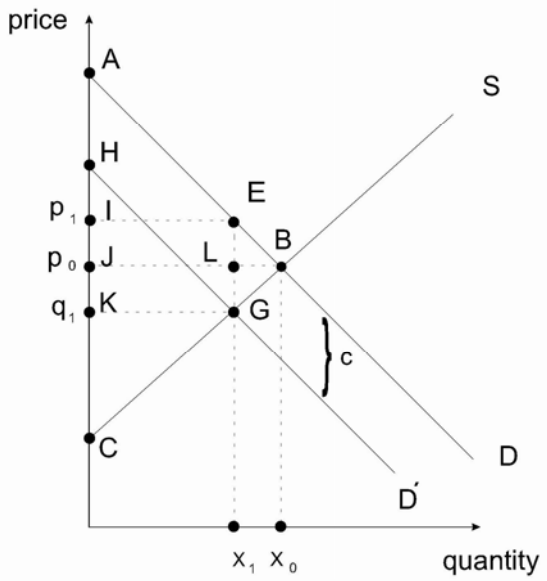

Figure 3

Because the remittance obligation for this per-unit cost is legally assigned to workers, it means that, at whatever price they would have required to provide any given output of labor previously, they now require a price that is c higher. This fact is represented by a parallel upward shift in the labor supply curve by a distance of c. The new supply curve is labeled S', which means that, at any quantity of labor provided, the height of S' represents the wage received by workers that would have to be necessary to induce this output. The height of S at any given output represents what the worker would receive for labor, net of the new cost c, if that much labor were sold. After the introduction of this new cost, the new long-run equilibrium wage paid by employers is p_1 and the equilibrium output is x_1; the wage net of the cost is q_1, which is equal to p_1-c.

Because there is a new cost that has been introduced into this market, it should not be a surprise that there is a loss of social welfare, which is represented by the decline in overall worker and employer surplus, shown as the area EBCF in Figure 2. The question now is, given the particular assignment of remittance obligations (here to workers), who actually bears the burden of the cost, where by "bearing the burden" we again mean whose welfare or utility is reduced as a result of this new cost.[31] The naïve answer would be that the workers bear the cost, because they are legally responsible for remittance.

[31] The loss of total surplus in Figure 2 is the area EBCF; this is the sum of EGCF, the cost c times actual output x_1, or cx_1, and the area EBG, which represents the social cost of forgoing the output x_0-x_1. As we will see later, the triangle is analogous to the classic deadweight loss, or Harberger, triangle that is well-known in tax analysis.

However, because of the change in the prices of labor caused by the increased cost that shifts the supply curve, and because of the divergence between the wage rate paid by the employer (p_1) and the wage net of cost received by the worker (q_1) in the new equilibrium, the allocation of the economic burden of the new cost is *not* determined by the assignment of the remittance obligation. Rather, it is determined by the elasticities of supply and demand for the workers' labor.

To see this point, refer again to Figure 2. How the discovery of the new labor cost will affect the welfare of workers and employers is approximated by the change in employer and worker surplus, respectively.[32] The decline in employer surplus is the area IEBJ, which represents the loss of utility to employers due to the increased price for labor and the reduced consumption of labor. IEBJ is equal to the rectangle IELJ (which is $(p_1-p_0)x_1$ – or the portion of the aggregate cost of third-party risk borne by employers at the new equilibrium quantity) plus the triangle EBL (which is the loss of value to employers resulting from the reduction in the quantity purchased). By similar logic, the loss in worker surplus is JBGK, which is due to the reduction in the net-of-cost price of the amount of labor produced, JLGK,[33] and the loss of value to workers from the reduction in quantity of labor supplied, the triangle LBG. The divergence between the equilibrium wage paid by the employer (p_1) and the equilibrium net-of-harm-related-cost price received by the worker (q_1) is key here. The extent to which these two prices will diverge from the original equilibrium price (p_0) that prevailed prior to the discovery of the new cost, will determine how this new cost affects the welfare of employers and workers. This "split" of the new cost in turn depends on the relative elasticity of supply and demand: the higher is the relative elasticity of demand for labor (i.e., the flatter the curve), the lower will be (p_1-p_0) relative to (p_0-q_1), and the lower will be the relative burden borne by the employers. The same point could be made about supply: the more elastic the supply of labor, the lower will be (p_0-q_1) relative to (p_1-p_0). In sum, as between workers and employers, the (relatively) more elastic party – the one with better alternatives to this particular employment relationship – will bear less of the economic burden of the new third-party liability.

Now for the invariance point mentioned in the introduction: The distribution of the economic burden imposed by these new costs of third-party liability between sellers and buyers (workers and employers here) will depend on the relative elasticities, and that distributional outcome will be invariant to the assignment of the initial legal obligation. This point is illustrated by changing the example to assign to employers rather than workers the legal obligation to remit the cost of the third-party liability. Figure 3 shows the results. The value of labor to employers, net of the new liability cost, is unchanged; therefore, the D curve still represents the willingness to pay net of this cost. However, the price employers are willing to pay is less than before. Thus, instead of a shift in supply, we have a downward shift in the demand curve, from D to D', by an amount equal to the new liability cost, c. The new demand curve intersects the supply curve at point G, and q_1 is the new equilibrium price paid to the workers. The total cost to the employer is q_1+c, which is equal to p_1. Comparing Figure 3 to Figure 2, we see that

[32] Here employer and worker surplus are just specific cases of consumer and producer surplus.
[33] This is calculated simply by multiplying the change in the price received by producers $(p_0 - q_1)$ by the new equilibrium quantity produced, x_1

everything is the same, including the total wage paid by employers, the price received by workers, and the quantity of labor. Both the employer surplus and the worker surplus are the same in both situations, as is the loss of surplus caused by the discovery of the new liability cost. In Figure 3 the lost surplus is the area ABGH, which is exactly equal to area FEBC in Figure 2, and both are equal to cx_1+EBG. The incidence and efficiency consequences are identical.

b. Differential Prevention Costs: The Least-Cost Harm Avoider

Note that the invariance result just described remains unchanged if we relax the assumption that neither party is a cheaper-cost harm avoider than the other, so long as we maintain the Coasean assumptions of zero transaction costs as between buyer and seller and the free transferability of interests. Imagine, for example, that workers happen to be the cheaper-cost harm avoiders, such that the per-unit cost to them of being assigned legal responsibility for third-party harms is not c but the smaller c'; whereas the cost of third-party liability remains c for employers.[34] Thus, were it not for the Coase Theorem, one might conclude, by a comparison of Figure 4 and Figure 3, that the overall loss of social welfare caused by third-party liability would be lower if the legal obligation were assigned to workers. Not so, under Coase. That is, even if the remittance obligation were imposed initially on employers, competition would induce workers to offer to assume liability for the third-party harm (and to purchase insurance for the risk at cost c'), which employers would accept, because the c' is by assumption lower than the cost, c, of the employers' purchasing insurance against the risk on their own. Thus, no matter how the initial legal obligation is assigned, with frictionless transferability the remittance obligation between employer and worker (between buyer and seller) would end up in the efficient place: on workers. And we would end up with Figure 4.[35] Obviously, the same sort of analysis could be done if the employer were the least-cost harm avoider, in which case, regardless of the law's assignment of tort liability, we would expect the parties to agree to employment contracts that placed tort liability on employers.

[34] Thus, we are assuming for simplicity that either the employee can take steps to reduce the third-party accident risk or the employer can do so, but not both simultaneously. Thus, the question is which of them should be given assigned the legal responsibility for the full harm. In many situations, of course, it will be optimal for both the employer and the employee to make investments in "care" (expenditures to reduce the expected costs of third-party harm). In such situations, there is no single "cheapest-cost harm avoider." This complication will not matter in a contractual setting in which buyers and sellers, through their Coasean interactions with each other, can create incentives for both parties to take optimal care. We use the cheapest-cost harm avoider example for ease of exposition. We also assume that the only possible liability rule is strict liability for third-party harm, which will be imposed either on employers or employees. The analysis could also be applied to fault-based liability rules.

[35] In Figure 4, the reduction in equilibrium output is smaller compared to Figure 2 or 3. The increase in the wage paid is less, as is the decline in the wage received by the worker. Finally, the social cost is lower, being equal to F'E'BC, or $c'x_1'$+E'BG'.

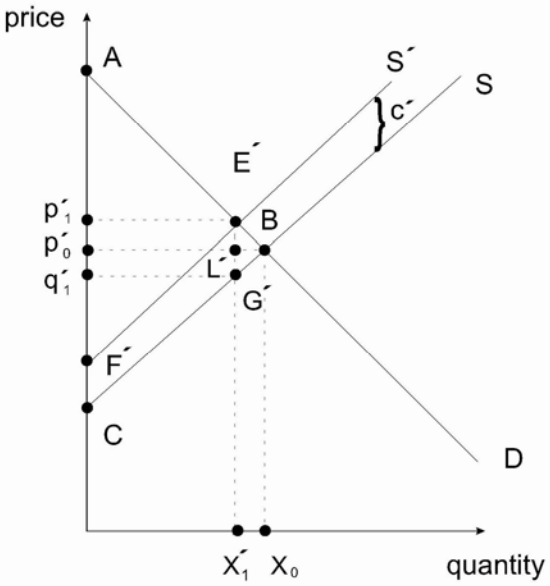

Figure 4

This invariance conclusion, of course, does not imply that the assignment of the legal responsibility for third-party liability is irrelevant in a world with *high* transaction costs (as between employer and employee) or in a world in which legal entitlements are *nontransferable*. For example, if we imagine that transaction costs are high, the efficient result would be to assign the responsibility for third-party liability to the least-cost harm avoider – whichever party faced cost c' rather than c – assuming the policy maker can determine with relative ease who that is.[36] If that happens to be the workers, the most efficient assignment of legal responsibility would entail worker liability; if the employer, however, is the least-cost harm avoider, then the rule should be employer liability. This is just standard Calabresi. Likewise, even if transaction costs are low as between the market participants whose transactions produce the third-party harm, if we imagine that the legal entitlement in question will be made nontransferable, then the initial legal rule will matter. Thus, for example, if workers are the least-cost avoiders of third-party harm (i.e., the cost would be c' for workers and c for employers) and we place the legal responsibility on employers, and (importantly) we make that legal assignment nontransferable, then the parties will be made worse off. Indeed, even workers, the likely intended beneficiaries of such a rule, may be made worse off.[37]

[36] More specifically, assuming the cost of identifying the cheapest-cost harm avoider is lower than the cost savings from moving from c to c'.
[37] Craswell, *supra* note __.

c. Differential Administrative Costs: Insolvent Defendants, Least-Cost Liability Avoider

In the last section we concluded that, in a situation in which a buyer-seller market transaction gives rise to a third-party harm, it would be optimal to assign the legal responsibility for the third-party harm to the least-cost harm avoider, as between the buyer and the seller, assuming (among other things) that the cost of identifying the latter is relatively low.[38] In this section we address an important qualification to that conclusion. This qualification concerns the relative administrative costs of various alternative forms of regulation, as compared with the cost of the negative externality at issue. For example, consider how the analysis changes if the least-cost harm avoider is judgment-proof; that is, the least-cost harm avoider does not have assets sufficient to cover the potential tort liability and will therefore, *to the extent of the excess*, ignore the threat of *ex post* liability.

To see how this new assumption alters the analysis, let us also assume that workers are the least-cost harm avoiders. But imagine that they are entirely judgment-proof. This is an extreme example, but it is not utterly fanciful. If the only assets the workers have are the equity in their primary residences and their retirement accounts—assets that are to some extent protected from tort creditors under state bankruptcy laws—they would indeed be largely judgment-proof.[39] In that case, although the workers may be the least-cost *harm* avoiders, they are also the least-cost *liability* avoiders. Being the cheaper-cost liability avoiders, however, makes them decidedly not the overall least-cost alternative in terms of total social costs. To the contrary, in such a situation, the overall cost to the plaintiff (or to the legal system in general) of forcing the judgment-proof workers (and hence, through the price mechanism, employers) to internalize third-party harm would likely be extremely high. The reason is that policymakers would have to resort to some other form of regulation, such as *ex ante* command-and-control supervision of the worker's conduct, which is a type of regulation that in many situations is considered to be more expensive than simple *ex post* liability.[40] In such a situation, the combined private compliance and public administrative costs associated with internalizing the third-party harm to the workers might well exceed the harm to the third-party. In a sense, therefore, the so-called judgment proof problem can be seen as an administrative- or enforcement-cost problem.

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[38] We are assuming that the third-party victim can do nothing to reduce the risk of harm and is fully insured against the consequences of the harm. Given that information is costly, it may be impossible at reasonable cost for the social planner to determine who the cheapest-cost harm avoider is. That is, both c and c' may not be cost-justifiably observable by the legal authority. If that is the case, then the assignment of the obligation has to be made on some other basis.

[39] Many states limit the bankruptcy exemption available for retirement accounts and for primary residences.

[40] It is generally thought that, where the judgment proof problem is not present, *ex post* liability is a cheaper way of internalizing negative externalities, unless we believe that regulators are likely to know more about the relevant risks than the parties involved. The informational burden on the regulator of the *ex post* liability system is considered relatively low compared with *ex ante* regulation. Steven Shavell, *Strict Liability versus Negligence*, 9 J. Legal Stud. *1* (1980); Donald Wittman, *Prior Regulation vs. Post Liability: The Choice between Input and Output Monitoring*, 6 J. Legal Stud. 193 (1977).

Because of this judgment-proof/administrative-cost problem, if imposing liability on the least-cost harm avoider (here, the worker) were the only *ex post* liability option, the efficient result might simply be no liability (i.e., to leave the costs on the victims). However, that is not the only *ex post* liability option. It is also possible to impose the tort remittance responsibility on the next least-cost harm avoider – here the employers. And if employers are not judgment-proof, it may generate lower overall social cost to impose liability on them rather than either (a) to impose liability on the workers, (b) to engage in *ex ante* regulation, or (c) to leave the costs on the plaintiffs.

To see this point, go back to our example and assume that if workers are assigned the third-party liabilities (and they are not judgment-proof), the per-unit cost of that liability will be represented by c'; whereas, if the liability is assigned to employers the per-unit cost would be the larger cost, c. Thus, workers in this case are the least-cost harm avoiders. However, if employees are judgment-proof (requiring very expensive *ex ante* regulation to internalize the cost of third-party harms to this market), and if we include the administrative cost as part of the overall social cost, then the full cost of internalizing the third-party harm would not be c' but c", which is, by assumption, even larger than c. In this situation, overall social welfare will be maximized by imposing liability on employers, who are, again, the next-least-cost harm avoiders.

A version of the foregoing argument – the combination of the least-cost harm avoider story and the judgment-proof defendant story – is in fact the standard economic rationale for the tort concept of vicarious liability.[41] "Vicarious liability" in the most general sense means to hold one party strictly liable for the tort committed by another. The primary justification for this sort of secondary liability indeed builds on the idea that the former party may have some effective control over the harm caused by the latter and may be more amenable to regulation by *ex post* liability. Thus, under the general legal doctrine of *respondeat superior*, whenever an agent, who is under the control of a principal, commits a tort against a third party, the principal may be held liable for the third-party harm, assuming the agent committed the tort while acting within the scope of the agency relationship.[42] Applying this principle to the employment context, if an employee, while acting within the scope of her employment role, commits a tort and causes a harm to some third party, the injured party can sue either the employee directly for negligence or the employer vicariously, assuming the plaintiff can establish the elements of a tort claim (duty, breach, harm, and causation) against the employee. In most cases, of course, the third party will sue both the employer and the employee, who can be held jointly and severally liable for the employee's tort.[43] Once a judgment is secured against both parties, the plaintiff can then seek to enforce it against either defendant, or partly against

[41] Alan O. Sykes, *An Efficiency Analysis of Vicarious Liability Under the Law of Agency*, 91 YALE L. J. 168 (1981); Lewis A. Kornhauser, *An Economic Analysis of the Choice between Enterprise and Personal Liability for Accidents*, 70 CAL. L. REV. 1345 (1982); Alan O. Sykes, *The Economics of Vicarious Liability*, 93 YALE L. J. 1231 (1984); SHAVELL, *supra* note __ (1987); and Renier H. Kraakman, *Vicarious and Corporate Civil Liability*, in ENCYCLOPEDIA OF LAW AND ECONOMICS, VOLUME II. CIVIL LAW AND ECONOMICS (Boudewijn Bouckaert, and Gerrit De Geest, eds.) (2000), available at http://users.ugent.be/~gdegeest/3400book.pdf.

[42] RESTATEMENT (SECOND) OF AGENCY, 1958, §§2, 219, 220, 229.

[43] DAN B. DOBBS, THE LAW OF TORTS 1078 (2000).

one and partly against the other, whatever is most expedient.[44] And if the employer is the only party who is not judgment-proof (either because the employer is the only party with sufficient assets to cover the liability or the only party with adequate liability insurance coverage), the judgment will typically be enforced against the employer. If the employer is liable only vicariously (and not as a result of its own separate tort, such as negligence), then traditionally the employer would be allowed to seek "indemnity" from the employee.[45] Interestingly, however, the right of indemnification from employees is not often invoked, perhaps because employers are, in effect, acting as the liability insurers of their employees.[46]

The two primary efficiency justifications for vicarious liability of employers for the torts of their employees involve either a least-cost harm avoider type of argument (on the theory that employers will often be in a better position than the employees to take cost-effective steps to minimize the relevant expected harms) or a judgment-proof or "deep-pocket" type of story.[47] And the two arguments work together in the way that is similar to the framework set out in this Article, although prior analyses of this question have not emphasized the importance of comparative administrative costs. Thus, a case can be made that in many situations the employer will be, if not the least-cost harm avoider, a *cheaper*-cost harm avoider than the plaintiff. Moreover, employees will often be partially or fully judgment-proof with respect to a potential tort judgment and thus partially if not totally non-responsive to the threat of legal liability, thus strengthening the case for employer vicarious liability.

Similar arguments can be made for other types of vicarious liability. For example, vicarious liability can also be imposed jointly and severally on all of the partners in a joint enterprise for the tort of any other partner acting within the scope of the partnership.[48] In a more extreme example of vicarious liability, some scholars and lawyers have argued the gun manufacturers should be held vicariously liable for the injuries and deaths caused by gun violence.[49] (Congress and the courts have rejected this argument.)[50] Joint-and-several liability is sometimes also imposed in cases that are not normally characterized as instances of vicarious liability where several parties

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[44] *Id.*

[45] *Id.* at 1079. In other sorts of joint-and-several liability tort actions, where the defendants are not merely being held vicariously liable but are themselves legal responsible at least in part for the tortious harm, then rather than indemnification, the defendant who is forced to pay the judgment can seek "contribution" for the fair shares owed by the other defendants. *Id.*

[46] Indeed, employers typically purchase liability insurance that covers the run-of-the-mill negligence torts committed by their employees within the scope of employment. If employers did starting seeking indemnification from their employees for these torts, presumably employees would then begin to purchase their own separate workplace liability insurance.

[47] *See* cites *supra* note __.

[48] *Id.* at 413.

[49] *E.g.*, Paul R. Bonney, *Manufacturers' Strict Liability for Handgun Injuries: An Economic Analysis*, 73 GEORGETOWN L. J. 1437 (1985); Timothy Lytton, *Tort Claims Against Gun Manufacturers for Crime-Related Injuries: Defining a Suitable Role for the Tort System in Regulating the Firearms Industry*, 65 MO. L. REV. 1, 7-8 (2000); and Rachana Bhowmik, *Aiming for Accountability: How City Lawsuits Can Help Reform an Irresponsible Gun Industry*, 11 J.L. & POL'Y 67 (2002).

[50] In 2005 Congress enacted the Protection of Lawful Commerce in Arms Act, which exempts gun manufacturers and dealers from being held liable for crimes committed by people using guns. Pub. L. No. 109-92, 119 Stat. 2095 (codified as 15 U.S.C. §§ 7901-03) (2005)).

contributed to a single plaintiff injury. In any event, the argument for joint-and-several liability in these contexts (whether vicarious or not) can be put in efficiency, cost-internalization terms that should at this point be familiar.

Consider the hand-gun example again, which, though extreme, makes the point: Even if gun-toting criminals are in some sense the least-cost harm avoiders with respect to gun violence, they are also often judgment proof. What's more, individuals who are likely to use guns to intentionally harm others are also often likely to expend considerable effort to avoid detection, which further raises the administrative costs of enforcing the tort liability against them. By contrast, the manufacturers of the guns that are used in those crime may, if given the proper incentive, be able to do something at relatively low cost (even if not the "lowest possible cost") to reduce the risk of harm due to gun violence, perhaps by redesigning the guns or by altering the way in which they are distributed. That is the care-level argument. The activity-level argument would be similar: if we assume that gun makers are solvent whereas criminal gun users are not (or that, more generally, it is less expensive administratively to enforce the liability on gun makers than criminal gun users), then shifting liability vicariously to the manufacturers could have beneficial activity-level effects, as gun prices would adjust upward to reflect a larger share of the overall social costs associated with gun sales.

We should also emphasize here an important limitation on vicarious employer liability. As mentioned above, under the doctrine of *respondeat superior*, the employer is liable only for those torts committed by employees while acting *within the scope of employment*.[51] (And as we discuss below, an efficiency argument can be made for expanding that liability to include independent contractors as well, at least in situations in which contractors are likely to be judgment proof.) Thus, if the worker causes harm while engaging in some activity that has nothing to do with his employment relationship with the employer, then the employer cannot be held vicariously liable for that loss. The rationale for this so-called "scope-of-employment doctrine" is straightforward: Whereas it might make sense to force the cost of any harm that is "caused" by an enterprise to be borne by that enterprise and (through the price mechanism) the parties who benefit from that enterprise, the same argument does not apply to costs that are not caused by the enterprise.[52] The scope-of-employment doctrine is an example of a more general point in tort law: For a tort defendant to be held liable for the harm of another party, the injured party must establish, among other things, a *causal* link between the harm and the defendant.

Much turns then on what counts as a causal link. Alan Sykes has argued that the appropriate definition of causation in the vicarious liability context is similar to the one that economists have argued for in other tort contexts: "The crucial variable in this analysis is the extent to which the employment relation increases the probability of each wrong."[53] Thus he argues that "an enterprise 'fully causes' the wrong of an employee if

[51] The classic discussion of the scope-of-employment doctrine is Young B. Smith, *Frolic and Detour*, 23 COLUM. L. REV. 444, 716 (1923).
[52] This idea, sometimes referred to as "enterprise liability," can also be found in the early work of Calabresi. See Guido Calabresi, *Some Thoughts on Risk Distribution and the Law of Torts*, 70 YALE L. J. 499, 500 (1961).
[53] Alan O. Sykes, *The Boundaries of Vicarious Liability: An Economic Analysis of the Scope*

the dissolution of the enterprise and subsequent unemployment of the employee would reduce the probability of the wrong to zero."[54] If no such causal link exists between the worker's employment with the employer and the harm caused to the third party, then imposing liability for that cost on the employer would, he argues, be inefficient for two reasons. First, such an expansion of vicarious liability would in effect turn the employer into the worker's general liability insurer, which is probably not the most efficient risk-spreading arrangement. Second, such an allocation of liability would, by imposing an arbitrary cost on the employer, have the effect of inefficiently reducing the scale of the enterprise.[55] To use an example outside of the employment context, it would be like making gun makers liable in tort not for the gun-related injuries caused by their customers, but for the *auto-related injuries* caused by their customers. Why should those auto-accident costs be assigned to the gun-manufacturing business merely because of the contractual nexus between the gun makers and the gun owners?

The scope-of-employment doctrine viewed this way seems sensible enough. This is not to say, however, that vicarious liability beyond the scope of employment would never make sense. For example, if there are efficient care-level investments that the employer can easily make that would reduce the probability or severity of the harm to third-parties caused by their employees *outside of the scope of employment*, and if transaction costs would prevent the parties from bargaining to this result on their own, then assigning liability for the worker's beyond-the-scope-of-employment harm to the employer might be efficient. It is standard to assume that the cheapest-cost harm avoider is one of the parties who caused the harm in the traditional sense of the concept of causation, but that need not necessarily be the case. Put differently, even if the disappearance of the employer and the employment relationship would not reduce the expected cost of the harm to zero (which is another way of saying, even if the employer and the employment relationship is not a "but for" cause of the third-party harm), the employer could conceivably still be the cheapest-cost (or next-cheapest-cost) harm avoider. It is at least possible that the employer could take steps on its own to reduce the risk of third-party harm – even if the activity in question is outside the scope of employment. For example, the employer could condition some portion of the workers' pay on their not causing any torts to third parties, for which the employer will be liable.[56]

Such a liability regime, where employers are held liable for (some) outside-the-scope-of-employment torts of their employees, could be thought of as a type of compulsory employer-provided generally liability insurance. Having employers' act as general

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of Employment Rule and Related Legal Doctrines, 101 HARV. L. REV. 563 (1988).

[54] *Id.*

[55] Again, this notion of causation has been applied more generally to tort law. Steven Shavell, *An Analysis of Causation and the Scope of Liability in the Law of Torts*, 9 J. LEGAL STUD. 468 (1980) ("One action is a *probabilistic cause* of a consequence relative to another action if the probability of occurrence of the consequence is higher given the first action than given the second."); Omri Ben-Shahar, *Causation and Foreseeability*, in THE ENCYCLOPEDIA OF LAW AND ECONOMICS ("Under the normative economic analysis, the proximate cause doctrine's designated role is to expand or shrink the scope of liability, in order to achieve efficient deterrence.").

[56] This idea is consistent with Calabresi's notion of assigning liability to the "best briber." Calabresi, *supra* note __, at 151-53. Calabresi argues that if it is difficult to *identify* the cheapest cost avoider, it might be efficient to assign liability to the party best able to identify the cheapest cost avoider and then to bribe them to make efficient investments in accident avoidance.

liability insurers for their workers (and not merely as workplace liability insurers, as they currently do) may not be efficient. But it might be. It is already the case that employers voluntarily provide health insurance for costs incurred by their employees that are unrelated to work, and some policymakers and experts (though obviously not all) believe that this is a sensible way of allocating health-care risks.[57] A similar approach to outside-of-employment liability risks should, therefore, not be dismissed out of hand. Whether such a reform would in fact be a good idea is, of course, an empirical question that would require further investigation that is well beyond the scope of this Article.[58]

None of this is to say that deep-pocket vicarious liability, whether limited to the scope of employment or not, will *always* be efficient. It depends on the comparison of the overall social costs (including the regulatory and administrative cost) of imposing and enforcing liability on the either the buyer or seller (employer or employee, gun-user or gun-maker) or the cost of leaving the liability on the injured victims. Moreover, in situations in which the worker is fully solvent, worker liability is likely the most efficient outcome. That is, sometimes the workers will have the deeper pockets. But if we assume that workers are usually more likely to be judgment proof and employers usually have the deeper pockets, and we assume further that *ex ante* regulation of these sorts of risks is often extremely expensive, it seems likely that in vicarious deep-pocket liability will often make sense, especially (as mentioned) in situations in which there are reasons to believe that the deep pocket also happens to be the least (or a relatively cheap) cost harm avoider, as will often be the case in employer/employee relationships – even if not in the gun-maker/gun-user case. In other situations, the balance of costs may cut in the other direction, or there may even be situations in which the employers rather than employees happen to be the judgment-proof parties, in which case the efficient result may then be employee rather than employer liability. [59] We make an analogous point below with respect to tax remittance obligations.

It is also worth emphasizing that when and how to impose vicarious liability are complex questions that often present difficult line-drawing problems. For example,

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[57] Thus, not only do employers remit premiums to purchase insurance that covers the risks associated with workplace injuries to their employees (i.e., workers' compensation insurance), they also remit premiums to cover their employees' health-related risks that have little or nothing to do with the workplace. We cannot infer from the existence of this practice that it is necessarily efficient. After all, employer-provided health insurance has long been subsidized through the federal income tax laws. Still, that such a subsidy has been left in place for so many years suggests that policymakers must believe that the subsidy has had some beneficial effects.

[58] This argument suggests an immediate and obvious Coasean counter-argument: if the market does not already allocate these risks in this way (that is, employers do not already tend to provide their employees with general liability insurance as a fringe benefit), then why should the law require it? The failure of the market to provide such a benefit, in other words, could be seen as evidence against its efficiency. The problem with that argument, of course, is that it ignores the incentives – discussed immediately below – that employers and their workers have to structure their contractual arrangements so as to externalize such liability costs onto third parties. That is, even though it might be efficient in some situations to assign liability for outside-of-employment worker-caused third-party harms to the employer, we should expect Coasean bargaining between employer and employees to push in the direction of assigning those liabilities to employees, who can benefit from their relatively greater chance of being judgment proof when the time to comes to pay the piper. Such an arrangement could be joint wealth maximizing for employer and worker although socially wasteful.

[59] Kornhauser, *supra* note __.

under *respondeat superior*, a principal is vicariously liable for the torts of its agent only if the principal had the power to control the manner in which the agent did his job and only if the agent commits the tort within the scope of the agency relationship. In the employment context, these requirements are manifest in the common-law distinction between "employees," who are subject to the control of the employer in how they do their work, and "independent contractors," who in theory are not.[60] Thus, an employer can be held vicariously liable for the torts of its employees but not of independent contractors who have been hired to do a job. On its face this distinction is consistent with notions of efficient deterrence and least-cost harm avoider, in that the employer will only be liable if it is in a position to control the worker's behavior. However, as soon as this sort of line is drawn, employers have an incentive to manipulate it, by hiring independent contractors to do the work that would otherwise (in the absence of this line in the doctrine) have been done by employees or simply to characterize employees as contractors by ceding real or apparent control to the workers. Either strategy could limit the employer's liability. In addition, because of this distinction in tort law between employees and independent contractors, employers have an incentive to hire contractors who are judgment-proof, which enables the contractors to avoid liability and essentially allows the contracting parties – buyers and sellers – to externalize the third-party harm.[61] There are, to be sure, potential solutions to this problem. For example, in situations in which workers have caused injuries to third parties, courts, instead of relying on the manipulable distinction between employees and contractors, could simply hold the employers liable any time the employee is insolvent and the employer is both solvent and at least the next-least-cost harm avoider. Of course, if the employee is expected to be solvent, then a rule that holds the employee liable can make sense as well.[62]

It should also be noted that *ex ante* regulation and vicarious deep-pocket liability are not the only possible solutions to the judgment-proof problem. For example, some have suggested the possibility of making the judgment-proof party purchase liability insurance that fully covers the potential liability.[63] For some situations this might be a plausible

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[60] The definition of an employee for tort law and tax law purposes relies on the same multi-factor common law test, which is designed to get at the question of control. See, e.g., Rev Rul 87-41, 1987-1 CB 296:

> Under the common law rules, the relationship of employer and employee exists when the "employer" has the right to control and direct the worker not only as to the result to be accomplished but also as to the details and means by which that result is to be accomplished. That is, an employee is subject to the will and control of the employer not only as to what work has to be done but also as to *how* the work must be done. In this connection, it isn't necessary that the employer actually direct or control the manner in which the services are performed; it's enough if the employer has the right to do so.

[61] Jennifer Arlen & W. Bentley MacLeod, *Beyond Master-Servant: A Critique of Vicarious Liability*, in EXPLORING TORT LAW (M. Stuart Madden, ed.) (Cambridge University Press, 2005). Of course, if third parties are aware of this potential externality, they might be less willing to do business with the employer. Thus, there is a way in which the market could induce the employer either to hire only employees or only contractors who are demonstrably solvent or who have liability insurance. This is probably why, for example, building contractors often advertise that their workers are "fully insured" or "fully bonded;" that is, so that potential customers will not be dissuaded by the fear of suffering an unrecoverable harm.

[62] Arlen and MacLeod, supra note __, makes a similar argument.

[63] In the absence of such a requirement, judgment-proof parties will have an incentive to purchase only enough liability insurance necessary to cover their assets that are subject to liability. Shavell, supra note __.

solution. For example, every state requires drivers either to purchase liability insurance or otherwise to demonstrate their "financial responsibility" before they are allowed to register their automobile. On the other hand, for other situations, compulsory liability insurance is impractical. And even in contexts where compulsory insurance is a realistic possibility, whether it will in general be efficient overall would depend on how the overall per unit cost of compulsory liability insurance (including the cost of administering such a system) would compare with the alternative costs of c, c', and c".

A key lesson that emerges from this analysis is that in these settings Coasean bargaining will not always be welfare-enhancing and that sometimes it will be socially optimal to make legal entitlements or obligations non-transferable. Why so? Imagine that assigning liability for third-party harms to employers rather than to employees minimized overall social costs (harm plus administrative cost) because employees are utterly judgment-proof and the next best alternative, *ex ante* regulation, is exorbitantly costly. In that situation, if we assigned the liability to the employers *but we allowed the obligation to be transferable*, competition would induce the employers, through Coasean bargaining, to shift the burden contractually to employees. Employers would initially save money by shedding the liability, and employees would be willing to accept this liability, knowing that they were judgment-proof. This general process might be thought of as a form of intentional or strategic judgment-proofing. It may be socially inefficient because shifting the liability (i.e., the remittance obligation) increases the enforcement costs, by which we mean the social costs attendant to noncompliance. Such costs, which are borne directly by tax law enforcers, are not internalized by either the employer or the employee.

How likely is this sort of intentional judgment-proofing in the real world? We are not aware of any systematic empirical studies of this question; however, the torts and the bankruptcy literatures both seem to assume that the problem is a real one. Some scholars have noted that there are substantial real-world incentives for parties intentionally to judgment proof themselves in order to externalize the costs of potential tort harms onto third parties. For example, a number of scholars have noted the externality that arises when corporate defendants become judgment-proof because of the doctrine of limited shareholder liability, which provides that a corporate shareholder's liability for the debts of the corporation cannot exceed that shareholder's equity investment in the corporation.[64] Moreover, some scholars have even observed that corporations have an incentive to strategically render themselves judgment-proof against large tort claims by shifting their most dangerous (or highest potential liability) activities into inadequately capitalized subsidiaries or brother-sister corporations. [65] In addition, corporate tort

[64] Henry Hansmann, & Renier Kraakman, *Toward Unlimited Shareholder Liability for Corporate Torts*, 100 YALE L. J. 1879 (1991).

[65] See generally Lynn M. LoPucki, *The Death of Liability*, 106 YALE L. J. 1 (1996); Lynn M. LoPucki, *The Essential Structure of Judgment Proofing*, 51 STAN. L. REV. 147 (1998). LoPucki contends that corporations have a strong incentive to (and in fact do) bifurcate their businesses into "operating entities," which will face potential tort liabilities, and "asset-owning entities," which will not – thereby effectively rendering the business judgment-proof. But see James J. White, *Corporate Judgment Proofing: A Response to Lynn LoPucki's "The Death of Liability,"* 107 YALE L. J. 1363 (1998) (arguing that LoPucki overstates the problem of corporate judgment proofing); and Yair Listokin, *Is Secured Debt Used to Redistribute Value from Tort Claimants in Bankruptcy? An Empirical Analysis*,57 DUKE L.J. 1037 (2008)

defendants may adopt the strategy of borrowing against their assets and giving the lenders security interests in those assets, which secured interests come before tort claimants in priority in the event of bankruptcy, thus increasing the chances that the tort victims will go uncompensated. Potential solutions that have been suggested for this sort of intentional judgment proofing include a range of policy proposals, including: imposing liability on shareholders (or, as some have suggested, on lenders as well), giving tort claimants a higher priority in bankruptcy proceedings, requiring corporations to purchase liability insurance, or even increasing the use of direct *ex ante* regulation by government agencies.

The more general point is that Coasean bargaining can lead to outcomes that are privately joint-wealth maximizing but inefficient for society overall. This problem will arise, among other places, when parties are allowed to shift a tort liability to the party with respect to whom, for whatever reason (including judgment proofness), enforcing the *ex post* liability would be most socially costly.[66] As we discuss below, there is an analogous set of problems in the tax context. That is, although the conventional wisdom among economists is that the assignment of tax remittance responsibility is irrelevant to efficiency and distributive outcomes, we show that, once enforcement and compliance costs are taken into account, those invariance conclusions may not obtain. We begin by presenting the conventional wisdom concerning the tax invariance results mentioned in the introduction.

d. From Torts to Tax

Before proceeding further to the tax analogy, we need to emphasize the fundamental differences between the tort and tax liabilities. In the tort scenario that we have been focusing on, private actions undertaken in the context of contractual relationships inflict harm or the risk of harm on other private parties. (There are of course many other tort settings that do not involve contractual relationships, but they are less relevant to the tax comparison.) The efficiency motivations for imposing tort liability in such a case are well known in the torts literature: to ensure that the right amount of the private activity is undertaken and also that the right amount of harm-reducing steps is taken (the activity-level and care-level effects mentioned above.) We might think of the costs incurred by parties to reduce the actual risks of harm to others as tort "compliance costs," which are analogous to the costs incurred by taxpayers to comply with the tax laws. Once a tort liability regime is in place, however, private parties may also take steps (other than activity-level and care-level changes) to reduce their effective liability for a given harm. For example, they might attempt to judgment-proof themselves. Or they might even attempt to "cover up" their tort, by taking steps to make it difficult to trace the causal

(finding that firms with relatively large potential tort liabilities do not reveal a greater propensity to use secured debt, suggesting that the motive to "redistribute" from tort plaintiffs to secured creditors plays little role).

[66] Below we discuss what changes when it is not socially optimal to completely enforce the liability.

connection between the product and the harm.[67] We might think of these costs as being akin to "evasion" on the tax side. Therefore, enforcing the tort liability itself generates costs – the costs of running the court system and establishing causation and liability -- that we call "administrative costs." To distinguish these issues, we have introduced the semantic distinction between the *least-cost harm avoider* (the party who can most efficiently reduce the harm or risk of harm by either care-level or activity-level changes, or both) and the *least-cost liability avoider* (the party who can most efficiently minimize the liability award, for a given amount of harm).

Contrast the above-described tort situation with the case of a tax. First we need to distinguish two types of taxes: those designed to correct externalities (sometimes called Pigouvian taxes) and those designed merely to raise revenue to spend on public goods. Pigouvian taxes are used much like tort law, to internalize externalities. Thus, if a given activity produces negative externalities, levying a tax on that activity equal to the marginal external social cost can be efficiency-enhancing. Thus, the primary efficiency effect of a Pigouvian tax is the activity-level effect mentioned above, as the tax moves the amount of the externality-generating activity (down) toward its optimal level. A Pigouvian tax can also, in theory, have efficiency-enhancing care-level effects, insofar as the tax can be adjusted *ex post* for the harm-reducing steps that are undertaken. Such *ex post* adjustments to Pigouvian taxes, however, are rarely if ever actually made. The Pigouvian tax reduces the private utility of the parties involved in the market, but produces an offsetting social benefit to the extent the collected revenue is spent on public goods.

In the case of non-Pigouvian taxes, the tax is not imposed with the objective of reducing the level of the taxed activity.[68] Indeed, any reduction in the amount of the taxed activity is an unintended, if unavoidable, negative consequence of a non-Pigouvian tax.[69] Thus, an optimal non-Pigouvian tax system seeks, other things equal, to minimize the cost of these behavioral consequences, known as distortions. The only social benefit of such taxes arises from the uses to which the tax revenue is put. Because the revenue has social value, it is generally socially optimal for the government to expend resources to ensure that tax liability is remitted. In drawing out the analogy between tort and tax, we concentrate in what follows on *non-Pigouvian* taxes.

4. Coase Meets the TRIPs

a. The Standard Tax Remittance Invariance Story: Zero Compliance and Administrative Costs

We have argued that the Coase Theorem and the law-and-economics literature on torts, including Calabresi's notion of identifying the least-cost harm avoider, primarily address the problem of choosing the optimal legal responsibility for some expected harm.

[67] The tobacco industry did this for many years, producing their own research results that supposedly disproved or undermined the link between smoking and various illnesses.

[68] A negative Pigouvian tax, or a Pigouvian subsidy, is designed to increase the level of the activity. In general, then, Pigouvian taxes/subsidies aim to change the level of some activity, pushing in the direction of optimality.

[69] Other than a lump-sum tax.

The problem to which we now turn, which is identical in some ways to the Coasean and Calabresian questions but different in others, is the problem of choosing the optimal assignment of the legal obligation to remit a given tax liability to the government.

The standard view among economists is that the assignment of the tax remittance obligation has no effect on the incidence of the tax in question. This is the TRIPI notion mentioned in the introduction, and something like it (though without the catchy acronym) can be found in every modern public finance text. The assumptions that underlie the TRIPI assertion typically are left implicit, but the basic story goes something like this: As above, it is standard to assume a competitive market setting – many small sellers and buyers, free entry and exit, no externalities, perfect information, long-run equilibrium price and quantity. The setting is often a tax triggered by sales of either commodities or labor. For simplicity, we assume, as does the literature, that the taxes are assessed on a per-unit basis, although a very similar sort of analysis, with essentially the same result, can be used for proportional taxes on value (i.e., so-called *ad valorem* taxes). It is also implicitly assumed in these models that there are no administrative costs or compliance costs (such as the costs of learning the tax laws, gathering the relevant information, and filing the appropriate forms), or that the administrative plus compliance costs are exactly the same among all remitters. These are important assumptions that we relax below.

Given all of these assumptions, the results follow immediately: no matter who – seller or buyer – is assigned the legal responsibility for remitting the tax to the government, the results will be the same. The distributional consequences of the tax will depend not on the assignment of the remittance obligation, but on the *relative* supply and demand elasticities. This is exactly the same as in the Coasean externality case above. In addition, the degree of inefficiency or deadweight loss generated by the tax will depend not on the remittance responsibility but on the relevant elasticities: the less elastic the supply *or* demand for the good or service is, the smaller the deadweight loss.

We can illustrate our points with another stylized example, this one taken straight from the pages of any public finance text. If we start from Figure 2, which again represents the market for labor provided by workers and purchased by employers, we see again that there is an initial equilibrium price and quantity of labor sold and consumed. Next Figure 5 depicts what happens when we introduce a per unit tax on labor earnings equal to t.

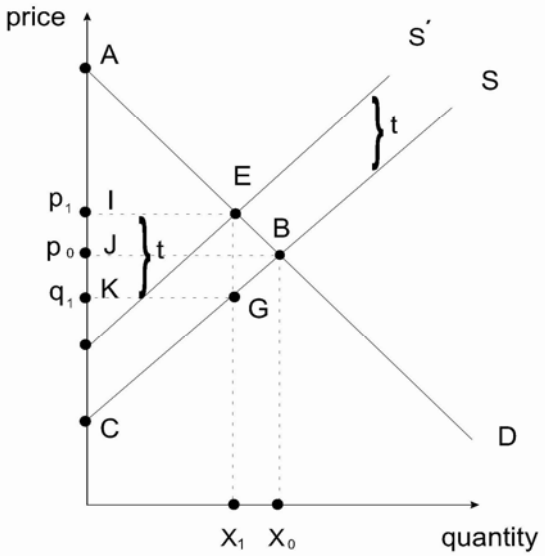

Figure 5

This figure deals specifically with a per-unit tax of t that must be remitted by the seller (here, the worker). As is standard, the consequences of such a tax (and remittance obligation) can be shown by a parallel shift upward in the supply curve, just as in Figure 2. Although the remittance obligation is placed on workers (the suppliers of labor), the economic burden of the tax will be shared by the suppliers and consumers, through the changes in the prices they receive and pay, respectively; and the sharing of this burden between suppliers and consumers will depend on the relative supply and demand elasticities for labor. Thus, the analysis of the sharing of the tax burden is identical to the analysis of the sharing of the harm in Figure 2. The analysis of the overall social cost created by the introduction of a tax, however, is different from the Figure 2 analysis, for the simple reason that introducing a new tax (other than a Pigouvian tax) is different from introducing a new cost.[70]

The difference is straightforward: When the tax, t, is introduced, it produces tax revenue, represented by the area IEGK, which, unlike the same area in Figure 2, is not a deadweight loss to society, but rather represents a transfer of purchasing power from private agents to the government. In a baseline case where the social value of the tax revenue per dollar is the same as the social value of a dollar of foregone private surplus,

[70] We can imagine that the new cost assigned in Figures 2 and 3 are actually per unit Pigouvian taxes designed to internalize some external cost that is created by the production or use of widgets. The effect on prices and quantities would be the same, but the effect on social cost would have to reflect the social cost engendered by the externality.

the social (or deadweight) loss is the difference between the decline in consumer and producer surplus, IEBGK, and the increase in tax revenue, IEGK; this difference is equal to the classic Harberger triangle representation of deadweight loss, the area EBG. This social cost arises because the tax imposes a "wedge" between the price paid by employers and the price received by workers, causing labor output to fall. The area EBG represents the social cost of the distortion of output from x_0 to x_1; the vertical distance between the S curve and the D curve represents the social cost of each marginal unit of the forgone output, which is the difference between the value to the consumer and the value of the resources needed to produce it.

And now for the tax invariance result. Figure 6 shows the effects of a unit tax of t on wages in the case where the employer must remit.

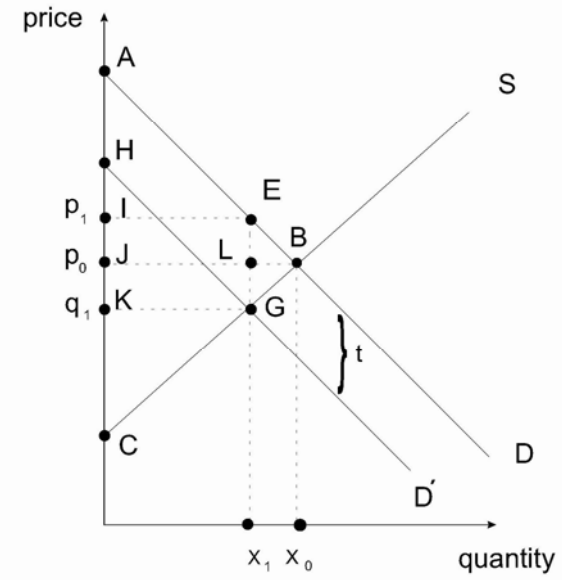

Figure 6

As in the comparison between Figure 2 and 3, everything is exactly the same as between Figure 5 and 6: the wage paid by the employer and the wage received by the worker, the change in employer and worker surplus, the change in output, the tax revenue collected, and the deadweight loss. Thus, not only is the allocation of the burden between employers and workers invariant (which we have called TRIPI), but also there is exactly the same degree of inefficiency (or deadweight loss) produced by either remittance

assignment (TRIPE). Again, this is the standard tax invariance explanation that is conventional wisdom among tax economists.[71]

b. Compliance Costs

As was the case with the invariance conclusions above in our contractual version of the Coase Theorem, a key implicit assumption of the standard demonstrations of these tax invariance propositions is that there are no administrative or compliance costs generated in the tax collection process, where administrative costs are again defined as those borne in the first instance by the government (but ultimately borne by individual taxpayers) and compliance costs are defined as those borne in the first instance by private parties (though these too may be shifted to parties other than those who "remit" the compliance costs). In the real world, of course, just as a tort system, or any other regulatory system, generates administrative and compliance costs, so too do tax systems.

To expand our analysis to deal with these realities, we begin by assuming that taxpayers do indeed have to incur compliance costs to satisfy their tax obligations. They have to learn the relevant tax laws and regulations, gather financial information that bear on their tax remittance obligations, file forms of various sorts, calculate the appropriate amount of tax and then remit it to the government; or they have to pay someone to do all those things for them. Moreover, we assume initially that, as between employers and employees, compliance costs are exactly the same. Specifically, we assume that whichever party is assigned the remittance burden will have to incur a per-unit compliance cost of c, and the other non-remitting party will not have to incur any compliance costs. For simplicity, we assume that this compliance cost is a constant proportion of the amount of the good or service being produced in the transaction that triggers the tax. Thus, for every additional unit of labor sold and purchased in our example, the compliance cost goes up a proportional amount. These assumptions are entirely analogous to the assumptions in the previous section on tort liability. We put administrative costs aside for now. Given all of these assumptions, Figure 7 shows how to analyze compliance costs, when the per-unit tax of t is remitted by the supplier, who also directly shoulders the per-unit compliance cost of c.

The total deadweight loss to society is represented by the difference between the decline in consumer plus producer surplus, VUBNR, and the tax revenue collected, SMNR, which is equal to VUMS plus UBN. VUMS is the compliance cost and UBN is the social cost of distorting production/consumption from x_0 to x_2.

[71] Slemrod addresses the situations under which TRIPI and TRIPE fail, without addressing the analogy to Coase, Calabresi, and torts. Slemrod, supra note __ (2008).

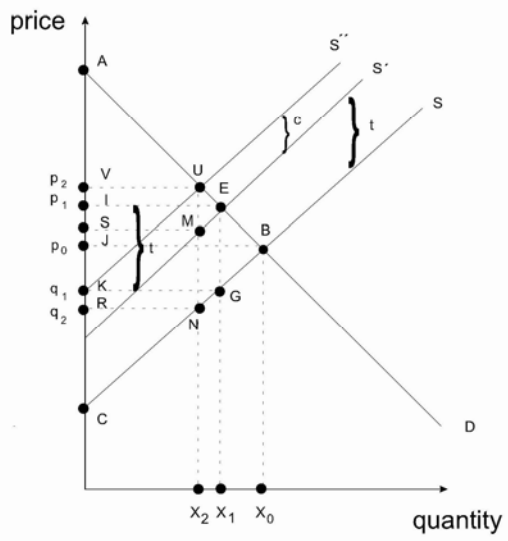

Figure 7

Figure 8 shows that the effect would be no different if remittance obligation were placed on the employer, which, again, would produce the same per-unit level of compliance cost.

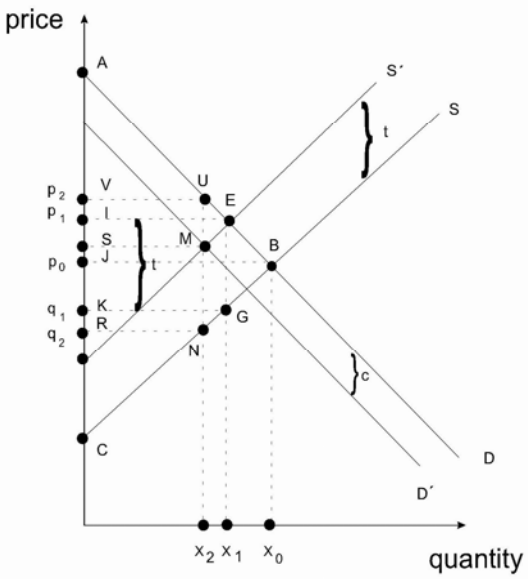

Figure 8

The point is analogous to the point that we analyzed in the comparison between Figures 2 and 3: the remittance obligation (and thus the identity of the party who directly incurs the compliance costs) is in equilibrium immaterial to the impact of these costs on the welfare of both parties and the allocation of resources.

Now we introduce the possibility of asymmetric compliance costs, where one class of parties (buyers or sellers, employers or employees) has lower compliance costs than the other. When might this be? Economies of scale to learning the tax laws, to gathering the relevant tax information, and to filing forms with the tax authorities, would suggest that bigger is better: that larger taxpayers would present lower compliance costs per unit of tax remitted and collected. For example, it seems likely that it would be cheaper to have the one employer (especially if it is a large employer) file the relevant forms and transfer the appropriate funds to the government rather than have dozens, hundreds, or thousands of employees do so separately.

The same argument could be made about the sales tax: we would expect, in general, that large retail sellers will be the least-cost remitters of the tax on a given sale as compared with relatively small consumers. These conclusions are analogous to the assumptions sometimes made in tort law to justify *respondeat superior* liability of employers for employee torts: that the employer can reduce the harm at a cost both less than the reduction in expected accident costs and less than the compliance cost of the employees. Recall that this was part of the argument for deep-pocket vicarious liability above. Now we make a similar, and to our minds equally plausible, argument in the

context of tax remittance. How would this fit with our model? Does it alter the standard tax invariance results that are so commonly demonstrated in public finance textbooks?

It depends. Are we in a Coasean world – with zero transaction costs and freely transferable entitlements and obligations – or are we not? If transaction costs between buyers and sellers (employers and employees) are zero, and if the parties are allowed to reallocate the remittance obligation between them as they see fit, then the parties will shift the remittance obligation to the least-cost remitter (here the party with the lower compliance costs), and, ignoring administrative and enforcement issues, social welfare will be maximized.[72] If, however, transaction costs prevent such efficient shifting of remittance responsibility, then overall social welfare will be maximized only by imposing the remittance obligation on the least-cost remitter.[73] Note also that, in terms of distribution, with either result (the efficient assignment of remittance responsibility to the least-cost remitter or the inefficient assignment to the other party) the distribution of utility between employers and employees will be determined by the relative elasticities of supply and demand.

c. Asymmetric Administrative Costs: Judgment-Proof, Dishonest, or Otherwise Hard-to-Reach Taxpayers

At this point we introduce the possibility that alternative tax remittance obligations will produce asymmetric tax administrative costs as between buyers and sellers – in our continuing example, as between employers and employees. With respect to a tax on wages, for example, if it could be shown that the costs to the government of administering (i.e., enforcing) an employer-based tax remittance obligation are lower than the cost of administering an employee-based remittance obligation, that would be an independent justification for placing the remittance responsibility on employers – independent of the compliance-cost argument.[74] And the same could be said of a retail sales tax, assuming that the tax remittance obligations of sellers are cheaper to enforce than the tax remittance obligations of buyers.

What might be the source of such differential administrative costs? In the torts context, we focused on insolvency or judgment-proofness as the source of differential administrative expense, because internalizing costs to a judgment-proof party may require costly *ex ante* regulation or compulsory liability insurance. Judgment-proofness is relevant in the tax context as well, although it is somewhat less of a problem both because of the nature of tax liabilities (which arise more slowly and predictably than do tort liabilities) and because of the special privileges typically afforded the tax collector in bankruptcy.[75] Still, some individual taxpayers, especially taxpayers who live from

[72] An example is the remittance by the lender rather than homeowner for property taxes. This may be related to which party loses in the event of foreclosure. Slemrod, *supra* note __ (2008).
[73] Craswell, *supra* note __.
[74] For now we continue to assume that the government expends whatever resources are necessary to collect the entire legal tax obligation.
[75] For example, with U.S. federal taxes (income, gift, or estate), the U.S. government automatically receives a lien against *all* the assets of a taxpayer if the taxpayer does not pay the taxes upon "demand." Sec. 6321.

paycheck to paycheck, may have relatively few resources with which to pay a large tax judgment. Indeed, one justification commonly given for the current remittance regime for employment taxes in the U.S. is precisely this concern about judgment-proofness. As one well-known commentator put it, "[w]ithout a pay-as-you-earn system making the employer a 'deputy tax collector,' it would be difficult if not impossible to collect taxes from employees who spend their wages as fast as they are received."[76] Likewise, corporate taxpayers are vulnerable to bankruptcy, which can leave them with little money with which to pay its tax liability. In any event, if the tax remittance obligation is assigned to a party who ends up being insolvent, the tax is obviously less likely to be collected than otherwise *absent the expenditure of additional administrative resources.*

The possibility of an insolvent tax remitter is not the only potential source of asymmetric administrative costs. It could also be argued that it is inherently cheaper (per dollar of revenue raised) for the tax authority to police large taxpayers, because of the economics of scale in tax enforcement. It is cheaper, for example, for the government to audit a single large employer than to audit all of the employers' employees separately. In addition, corporate taxpayers may have more financially at stake in their reputations and may therefore be less willing to risk being found guilty of tax evasion.[77] If that is true, the per-dollar cost of administering an income tax system in which the remittance obligation is placed on large employers would be lower than the per-dollar cost of a system that placed the obligation on employees. The same argument could be made with respect to sales taxes. That is, imposing the sales tax remittance obligation on large retail sellers to remit is almost certainly less costly administratively than asking each retail purchaser to remit the tax. We acknowledge, of course, that large corporations also have agency problems; and sometimes corporate management may be more willing to engage in tax fraud than even the corporations' shareholders would prefer. On the other hand, the more employees that are involved, the more difficult it is to maintain a pattern of outright tax evasion, as the possibility of detection rises with the number of potential whistleblowers.

What these arguments suggest is that, in situations in which the policymaker is choosing who between two contractually connected parties should bear the tax remittance responsibility for the tax triggered by the parties' interaction, the best way to achieve the policymaker's intended combination of tax revenue and distributive burdens (at lowest cost) is to impose the remittance obligation on the larger, wealthier party – the one most likely to have assets with which to pay the tax and the one whose tax compliance will be cheapest (per dollar of tax collected) to ensure (that is, the one who, if given the remittance obligation, will give rise to the lowest administrative costs of tax enforcement). Notice that this administrative cost argument cuts in the same direction as the least-cost remitter argument, which also points in the direction of giving the remittance obligation to the larger, wealthier party – the one who could benefit from economies of scale with respect to tax compliance costs. This convergence is similar to

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Such tax liens automatically take priority over the taxpayer's own claim to the property and, shortly thereafter, over all other creditors other than secured creditors whose interests were perfected earlier.

[76] BITTKER & LOKKEN, FEDERAL INCOME TAXATION OF INCOME, GIFTS, & ESTATES ¶ 111.5.2 (quoting McGraw-Hill, Inc. v. US, 623 F2d 700 (Ct. Cl. 1980)).

[77] Joel Slemrod, *The Economics of Corporate Tax Selfishness*, 57 NAT. TAX J. 877 (2004).

the convergence of arguments, discussed above, in favor of vicarious tort liability, as both least-cost harm avoider and administrative/enforcement cost arguments favored *respondeat superior* liability under certain assumptions. In sum, just as deep-pocket tort liability can be justified in the tort context on efficiency grounds, it can also be justified in the tax context on similar grounds.

Of course, size is not everything. There may be situations in which, irrespective of the relative size or wealth of the parties to a given transaction, one or the other is more likely to be beyond the reach of the tax authority (which we can think of as giving rise to very high administrative costs). This will be a problem when one of the parties is either outside of the taxing jurisdiction or is readily able to leave the jurisdiction. For example, imagine a taxable transaction in which the payer is within the taxing jurisdiction and the payee is outside the taxing jurisdiction. If the tax authority does not require the payer to withhold and remit tax on the payment, there may be no other opportunity to collect the tax, as the payee will be effectively judgment-proof – even if the payee has more overall assets than the payer. This issue can obviously arise in the international context, where payments are made by U.S. taxpayers to foreign individuals or entities, or in the domestic U.S. context, where state taxing authorities are trying to collect taxes on interstate transactions. Some might argue that in such a situation the best (or fairest) approach would be to find a way to have the payee remit the tax. Our point is that, even if that were possible (and we are assuming for the moment that it is), the incidence would be the same whether the payer or payee remits, and the administrative cost of enforcing a domestic payer remittance obligation will likely be much lower.

We should also note another analogy between the tax and tort remittance questions. In the tort context, we noted that it will not always be socially efficient to allow the parties to transfer the remittance obligation contractually between them; recall the discussion of strategic judgment proofing. A similar argument would apply in the tax context. Once we allow for such differential administrative costs, whether because of the economies of scale, the judgment-proof problem, the foreign or missing taxpayer problem, or because of differences in inherent willingness to evade taxes, then allowing the remittance responsibility to be transferable does not automatically lead to the socially efficient outcome because a transfer of remittance responsibility may reduce the sum of compliance costs but increase administrative costs by more than the compliance cost savings. In terms of the figures, an important difference between the analysis of Figure 4 and that of Figure 7 arises if the identity of the tax remitter affects the administrative cost of the tax collected. In this case the social cost of ILMS plus LBN shown in Figure 7 misses one component of the social cost. It is possible that moving to the low-cost remitter, where cost is measured in terms of compliance costs and distortion alone, might not represent the minimum social-cost remitter, if the former facilitates tax evasion or, in other words, makes tax enforcement more costly. The overall efficient tax remittance arrangement should minimize the sum of three cost elements: distortion cost, compliance cost, and administrative cost.

d. Optimal Evasion and Taxpayer Heterogeneity

So far we have implicitly (and sometimes explicitly) assumed that compliance costs and, in particular, administrative costs may have to be incurred to achieve compliance with the tax laws, but that, once these costs are incurred, complete compliance is achieved. In that context, we noted that the TRIPs do not hold, so long as there are asymmetric compliance or administrative costs as between the parties to the transaction that triggers the tax. What changes in our analysis if we recognize the fact that, despite optimal investments to ensure compliance, there will nevertheless be some successful evasion? Put differently, how does the analysis change if full compliance with the tax law is not a certainty? This may be because it is impossible to achieve full compliance. Or it may be because it is not worth the cost; that is, because of the nature of the social welfare function, there may – indeed, will almost certainly be – a point at which the cost of achieving marginally improved compliance exceeds the marginal benefit. In such a case, what is the effect on TRIPS? What does it mean for the optimal allocation of tax remittance responsibility?

As we argue in this section, the tax invariance propositions still do not hold. What's more, to the extent residual non-compliance is distributed heterogeneously across the population of taxed parties, it turns out that (ignoring how the tax dollars are spent) the introduction of a non-Pigouvian tax may actually improve the welfare of the noncompliant parties while decreasing the welfare of the compliant parties. A similar point can be made with respect to heterogeneous tort compliance.

Before we get to that result, though, notice that if tax compliance is uncertain the effect of a tax on equilibrium prices will depend on the expectations each side – buyer and seller – has about their eventual tax liability and on any attendant cost associated with (successful or unsuccessful) noncompliance. In the standard model of optimal evasion, individuals will evade as long as the reduction in their expected tax and penalty remittances exceeds the marginal private cost of the evasion, where private cost includes the costs to the tax remitters of disguising their behavior to the tax collector as well as the cost of remitters' increased risk-bearing owing to the uncertainty in after-tax income that the evasion creates. Because (it is assumed that) the marginal private costs are increasing with additional investments in evasion, whereas the marginal private gain is not, eventually the marginal private gain from evasion will fall short of the marginal private cost. Because of the costs incurred, the net private gain will be less than the expected tax saving.[78]

Governments have access to a number of policy actions that can reduce evasion, but it generally is not socially optimal to eliminate evasion *completely*, just as it is not optimal to expend the resources necessary to eliminate all torts or to expunge all robbery. This is true even when one enforcement tool is the financial penalty for detected evasion, which is not a social cost, because very high penalties may have consequences that are socially costly. This conclusion has important consequences for our analysis. To see this,

[78] Because of the penalty revenues collected on detected evasion, the private cost exceeds the social cost.

imagine that the remittance responsibility for a given tax is switched from one party from whom collection would be inexpensive (in terms of compliance and administrative costs), so inexpensive such that full compliance is socially optimal, to another from whom collection would be expensive. The optimal policy response would not in general be to maintain full compliance and incur the now-considerable administrative costs of so doing. Rather the optimal policy responses would be a combination of somewhat higher administrative expenditure plus allowing a lower level of compliance. This lower level of compliance entails social costs, including higher risk-bearing costs and perhaps the need to raise somewhat (not necessarily equal) more revenue in some other (costly) way. Thus, once the idea of socially optimal evasion is recognized, the increase in administrative costs does not accurately measure the increase in social costs from moving to an inferior remittance regime

Now recognize that the inclination and opportunity to evade successfully is heterogeneous – not only as between buyers and sellers (as we have already discussed) but within the class of buyers and within the class of sellers.[79] From an *ex ante* perspective, people (including those people who make decisions for firms) differ both in their intrinsic honesty and in their available opportunities for evasion.[80] From an *ex post* perspective, some acts of evasion are detected by enforcement systems, while others are not; of those acts that are detected, the penalties may differ. Although it is the aggregate response to a tax rate change that will determine how much a given tax rate change affects the consumer and producer prices, respectively, the effect on any one person or firm will depend on the price change and on their own exposure to the price, which now depends on their evasion behavior – which again turns on their *ex ante* characteristics and their *ex post* results – as well as their (other) preferences and technology.

To see the implications for the TRIPs of these more realistic assumptions, consider a tax on the income from house painting. Assume that the remittance obligation is placed on the painter rather than the paintee and that half of housepainters are scrupulously honest while the other half are scrupulously dishonest. Assume further that there is no private cost incurred to effect the evasion, that the probability of detection is zero, and, of course, that all parties are fully informed of all of these facts. What happens when the tax is introduced? The supply curve shifts up by only one-half of the tax rate, since only the one-half of the painters who actually will remit the taxes they owe will require a higher pre-tax payment to elicit the same work. The impact on equilibrium prices as always depends on the relative supply and demand elasticities, here for house painting services. For the sake of simplicity, say that the supply and demand elasticities are equal (and not affected by the evasion possibilities—see Section 4.e). In this case the price to

[79] Medema and Zerbe make a separate observation about the impact of heterogeneity: that when people have heterogeneous utility functions, the assignment of property rights can affect allocation because it changes aggregate demand functions, and therefore equilibrium production. For example, if the injurers have a higher wealth elasticity of demand for chili peppers than the injured, assigning the property rights to the injurers will increase the aggregate demand for chili peppers, and therefore their price, unless all goods are produced at constant cost (and therefore equilibrium prices are always unaffected by demand conditions). Medema & Zerbe, *supra* note __.

[80] To the extent that heterogeneous evasion opportunities apply to categories of employer and employee, there will be market adjustments in the remuneration of that activity; the following examples therefore apply to heterogeneity not associated with such categories. See the example of housepainters below.

consumers rises by exactly ¼ of the tax: one-half of the one-half-of-the-tax upward shift in the supply curve. As long as the price received by noncompliant painters is the same as the price paid by consumer (i.e., there is no tax wedge), the price they each receive goes up by this same amount. As a result, the non-compliant painters are better off because of this tax. In contrast, the price received by honest housepainters falls by three-quarters of the tax (i.e., the full tax remitted offset by a price increase of ¼ of the tax). An identical result could be reached if the heterogeneity was not with respect to inherent honesty, but judgment proofness; for example, if we assumed that half were judgment proof, half were not, and detection was a certainty.

Consider now a slightly different example involving a more general labor income tax. Specifically, imagine a labor income tax that is to be remitted by employers, and assume that the pre- and post-tax wages have adjusted to reflect this tax. With one exception: one small firm does not remit the tax, and it costlessly and completely gets away with it. (The firm's employees do not suspect, and are unaware of, the evasion). In this situation, the owners of the lone non-compliant firm are better off because in the new equilibrium they incur the lower after-tax wage rather than the pre-tax wage incurred by all other firms—indeed, they are better off because of the imposition of the tax. This occurs because the market adjustment in wages depends on the responses of the preponderance of tax-complying firms, not on the behavior of the relatively few (or single, in this example) non-compliant firms. That is, as long as the non-compliant firms remain only a small part of the market, they benefit from the decline in the after-tax wage expected by their (assumed to be homogeneous) workers, but they do not remit the tax that is the cause of that decline. We might say, then, that this result follows from the heterogeneity of firms with respect to their inclination and ability to evade taxes. If, alternatively, the remittance obligation were placed on employees instead of employers, then the employer heterogeneity would not matter, and what would matter is the heterogeneity of employees. Which side is given the obligation to remit will not affect the relative burden on average as between employers and employees, but will affect which particular parties (individuals and firms) win and lose, and by how much. Thus, TRIPI is violated in circumstances in which there is heterogeneity among taxpayers with respect to their willingness or ability to evade.

A similar analysis can be applied in the tort context. The best analogy would be the one discussed above involving parties who intentionally judgment proof themselves against potential tort liabilities. A firm or individual who knowingly engages in some activity that poses a risk of third-party harm that exceeds the injurer's ability to reimburse can be understood as a sort of tort liability evader. And the willingness and ability to engage in that sort of behavior is almost certainly heterogeneously distributed across parties, even within industries. As a result of this fact, of course, the naïve Coasean prediction that the assignment of liability should have no distributional consequences does not hold. Moreover, this argument lends credence to the familiar observation that the introduction of any tax or legal restriction actually increases the utility of the noncompliant parties (vis a vis the world without the tax or restriction), so long as there are enough compliant parties to cause an increase in the pre-tax price of the activity.

e. Non-proportional collection costs

To this point we have assumed that aggregate compliance costs are proportional to the aggregate quantity produced/consumed (i.e., they are a fixed per-unit constant), although we have allowed the costs at any aggregate output level to depend on what the remittance arrangements are. We have, though, hinted at the likelihood that the magnitude and nature of these costs may depend on the micro details of the markets involved. In this section we pursue the implications of looking at the micro-foundations of enforcement and compliance costs.

To fix ideas, consider a stylized world in which remittance-related compliance costs are completely inframarginal, in the sense that the per-period cost is unaffected by the extent of a participant's involvement (i.e., how much they buy, or sell) in a taxed activity, but only by the *fact* of participating in the market. In other words, there are fixed, but no variable, costs of compliance. Let the remittance burden be on firms. Some, presumably mostly small, firms will no longer be profitable, and will drop out of the market. This means that the supply curve shifts upward, and the new equilibrium price will be higher depending on the relative supply and demand elasticities. But the higher price is of greater value to bigger firms than to smaller firms (because they sell more), so that the new equilibrium will have implications for the distribution of firm sizes. Moreover, as above, these consequences would differ if the remittance responsibility was placed on consumers. In the latter case firm heterogeneity would be immaterial, and consumer heterogeneity would affect the outcome.

Consider the consequences if the remittance responsibility was placed on consumers, with a compliance cost triggered by participating in the market but unrelated to the extent of participation. Some consumers, presumably small ones, would be dissuaded from entering the market, and so the demand curve would shift down. This would cause a decline in the market price, depending on the relative supply and demand elasticities, but the decline would not offset the utility loss equally for small and large consumers; small consumers would be relatively worse off, because the price decline is of relatively little importance compared to the fixed compliance cost.

When there is evasion, having the remittance responsibility can also change the elasticity of response. For example, consider the consequences if the private cost of an employee evading a given amount of labor income is lower when the true amount of labor income is higher.[81] This implies that the elasticity of labor supply with respect to the pretax wage rate will be different from its elasticity with respect to the tax rate. It also reduces the effective marginal tax rate on supplying labor, because of the "evasion-facilitating" character of labor supply, and will in general alter both the height of the labor supply curve and its elasticity. To the extent it affects the elasticity of labor supply, the incidence of imposing any cost, including a compliance cost, will be changed. If the elasticity of labor supply is larger (smaller) than otherwise, then any cost will be more shifted away from (toward) labor than otherwise. If alternatively the employer had to remit and had evasion possibilities, then it is labor demand that is potentially affected, with different consequences for the incidence of tax liability or compliance cost. Only if

[81] Joel Slemrod, *A General Model of the Behavioral Response to Taxation*, 9 INTERNATIONAL TAX AND PUB. FIN. 119 (2001).

the pretax wage elasticity and tax rate elasticity of labor supply bear a particular symmetric relationship with the pretax wage and tax rate elasticity of labor supply will the remittance responsibility be irrelevant for the pretax and after-tax wage rate.

f. Equivalences

A transitivity property applies to the tax remittance invariance principles, TRIPI and TRIPE: if tax system A has identical consequences as tax system B, and tax system B has identical consequences as tax system C, then tax system A has identical consequences as tax system C. Stringing together a series of transitivity relationships reveals some well-known equivalences among tax systems with very different remittance arrangements, where equivalence means identical incidence, allocation, and efficiency consequences. Consider the retail sales tax. We have already discussed that the tax triggered by retail sales could, in principle, be remitted by the consumers or by the retail establishments. In the latter case, which is the norm for all retail sales taxes for reasons already discussed, there must be a mechanism to distinguish business sales made to other businesses from business sales to consumers; in U.S. states' retail sales taxes this is done by issuing business exemption certificates to business purchasers.[82]

Now recognize that, in the absence of enforcement concerns, the combination of a tax that must be remitted by one party to a transaction and an equal credit offered to the other party is equivalent to levying no net tax at all. Next observe that a value-added tax (VAT) is equivalent to a tax triggered by retail sales plus offsetting taxes and credits triggered by every business-to-business sale. Because each of these offsetting tax-and-credit remittance obligations net to zero, the value-added tax thus is—absent enforcement concerns—equivalent to a retail sales tax, as all tax textbooks note.[83]

What is the advantage of, as a VAT does, adding remittance obligations (and credit entitlements) for non-retail businesses to a retail sales tax, and thereby in principle involving all businesses in the tax system? The answer lies in the administrative and enforcement implications. Because of the difficulty of involving the multitude of consumers in the tax system, a retail sales tax has no natural way to check that the retailer has remitted the correct amount. But business-to-business sales allow for the possibility of such a check, in that the credit of the purchasing business is contingent on an invoice provided by the seller attesting to its remittance. Moreover, under a VAT the identity of the purchaser (i.e., whether it is a final consumer or a business) is no longer relevant, so business exemption certificates (and the evasion they induce and the enforcement they require) are not needed. Thus, applying the framework of this article, we might say that, although the VAT and the retail sales tax are equivalent assuming equal administrative costs, once we acknowledge the relatively high administrative costs that would be

[82] Abuse of such exemption certificates is a major enforcement concern.

[83] To see this, imagine a highly stylized economy consisting of two firms. Firm A uses $30 of labor to produce its product, which it sells for $40 to Firm B, making a $10 profit. Firm B uses Firm A's output as an input, and hires $45 of labor to produce a product that it sells to consumers for $100, making a $15 profit. A 10% retail sales tax would collect $10 from Firm B. Under a VAT, the tax base is receipts minus purchases from other businesses. Thus, a 10% value added tax would collect $4 from Firm A and $6 from Firm B, for a total of $10. Starting from a retail sales tax , adding the business-to-business transactions to the tax base adds $4 of tax liability on Firm A and a $4 credit for Firm B, and thus an additional net tax liability of zero.

necessary to achieve equivalent levels of compliance under the retail sales tax, the VAT is overall superior.[84]

The value-added tax is turned into the Hall-Rabushka flat tax by adding one more set of exactly offsetting tax obligations and credit entitlements—between firms and employees.[85] Under the flat tax (but not under a VAT), firms can deduct payments to workers (i.e., credit taxes) and the workers "owe" tax on their wages and salaries. If the business tax and labor income tax rate are equal, this is equivalent to levying no tax at all. In contrast to the switch from a retail sales tax to a VAT under the usual remittance arrangements for each, though, the switch from a VAT to a Hall-Rabushka flat tax need not entail any change in remittance responsibility because firms could withhold and remit tax to fulfill their workers' labor income tax obligations; thus the pattern of remittances could be identical to a VAT. The motivation for introducing these zero-net-tax obligations is that, by levying a tax on labor income and requiring individuals to complete returns, the tax obligation can be tailored to the individual worker's situation.

[84] The VAT, of course, has its own weaknesses in terms of enforceability. In recent years a new VAT tax evasion scam, called "missing trader fraud" or "carousel fraud," has spread across much of the VAT-using world, especially among EU countries, where goods can be sold between countries without triggering any net tax. In its simplest form, the scheme works this way: One party imports some good from another VAT country, free of tax because of the zero rating of exports. Then the importer turns around and sells the good to a domestic purchaser, charging a price that is somewhat higher than otherwise because of the VAT that is owed on the purchase (i.e., because most sales do result in the VAT being paid). The seller then disappears without actually remitting the tax on the sale. The domestic buyer, innocent and unaware of the fraud, may then file for a credit for the tax that should have been remitted by the buyer, only to learn that the taxing authority may be unwilling to give the credit for the tax that was not in fact remitted. See generally Richard Pincher, *The costs of VAT frauds: Bond House Systems Ltd and Optigen*, 5 **Brit. Tax Rev.** 346 (2003). The carousel concept arises when this arrangement is repeated, with several parties buying and selling the same product, with (again) some (though not all) of the parties involved simply disappearing without remitting any tax. The EU tax bar and tax enforcers regard the carousel fraud problem as a serious threat to the viability of the VAT as a reliable source of revenue, and some have even argued for experimenting with the retail sales tax alternative. See Michael Keen and Stephen Smith, *VAT Fraud and Evasion: What Do We Know and What Can Be Done?*, 59 Nat. Tax J. 861 (2006). What this example makes clear is that identifying the lowest-overall cost tax remitter (taking into account administrative costs) is not always an easy task, may defy our easy intuitions, and may even be a moving target. It also suggests the possibility of an expanded role for joint-and-several tax liability. In the carousel fraud example discussed above, this would mean holding the innocent buyer liable secondarily for the tax by disallowing their credit if the tax is not remitted by the buyer in the first instance. At least one court has decided, however, that this result is in appropriate and that innocent third parties who are caught up in the offending transaction should not be made to remit the tax. *Id*. Our framework, however, would suggest that requiring the innocent third parties to remit the tax might come closer to approximating the lawmakers' desired combination of efficiency and distributive outcomes. The argument is comparable to the argument for expanding the wage withholding rules to cover payments to independent contractors.

[85] The flat tax proposal is laid out in ROBERT E. HALL AND ALVIN RABUSHKA, THE FLAT TAX (1985). Under the tax, there is a business tax base and a personal tax base. The business tax base is receipts minus payments to labor and purchases from other firms. The personal tax base is receipts of labor income. Under the original Hall-Rabushka proposal, both bases are subject to an identical flat rate, and there is an exemption for personal income that depends on marital status. In the example of the preceding footnote, under a 10% flat tax with no exemption, Firm A would have a tax liability of $1, Firm B would have a tax liability of $1.50, and there would be labor income tax due of $7.50 (that could be remitted by the firms on behalf of the employees), for a total of $10.

In particular, each worker can be allocated a fixed exemption of labor income.[86] Thus, the motivation of moving from a VAT to a Hall-Rabushka flat tax is to allow flexibility in implementing progressivity and not, as in the case of moving from a retail sales tax to a VAT, to improve administration and enforcement.

Introducing zero-net-tax remittance obligations and credit entitlements for administration and enforcement reasons is the same motivation behind reverse withholding requirements, discussed below in section 5d. These obligations and entitlements need not be triggered by exactly the same transactions as the underlying tax base; for example, in a VAT the value of any single business-to-business sale, which triggers tax remittance obligations and credit entitlements, is not consumption. Indeed, any tax system is defined by the totality of its remittance obligations (and credit entitlements), any one of which need not be based on a well-known tax base such as aggregate consumption or production. For example, a tax on aggregate consumption can be implemented by levying tax on each act of consumption, or on each firm's value added, knowing that (ignoring foreign trade) aggregate value added equals aggregate consumption.

Now consider again the tort context. Imagine some harm arises out of the production or consumption of a good or service. We have already argued that, absent administrative and enforcement concerns, the tort liability could be placed on the producing firms or the consumers with equivalent consequences. We now see that tort liability could in principle be placed on any party doing business with either the producing firms or the consumers (or, in the employment context, any party doing business with either the employers or the employees) and, furthermore, that the base of any particular liability need not be the same as the harm-producing action. Pursuing the analogy with the VAT, if final consumption produces harm, the tort "remittance" liability could be placed not only on the retail business and consumer, but also on businesses throughout the production and distribution chain that precedes the retail transaction.

For example, just as a VAT can produce the equivalent level of tax revenue and distributional consequences as a retail sales tax, though at lower administrative costs, so too imposing tort liability on the parties who are in the lower stages of the chain of production of some product (that ultimately causes a third-party harm) can achieve equivalent consequences to imposing the harm on the final seller – and may do so at relatively low administrative costs. This is indeed one of the efficiency arguments for making strict products liability joint-and-several with respect to retail sellers, wholesalers, and manufacturers, including manufacturers of component parts.

g. Qualifications

Our results depend on an assumption that all market participants make decisions on the basis of tax-inclusive prices and are not affected by the situational framing of the prices or by any other "behavioral" phenomena, such as the endowment effect, that would introduce other considerations into their decisions. If, for example, a worker perceives the same after-tax take-home pay of $600 per week differently depending on whether the check comes after-tax or whether it comes pre-tax and she must remit the tax,

[86] In the X-tax championed by David Bradford, a graduated rate structure is applied to labor income.

this could affect the amount of labor supplied at a given after-tax wage and our conclusions would have to be modified.

Such behavioral phenomena could also have political economy implications, to the extent they affect taxpayer-voters' perception of the cost of government programs. There is some evidence that tax systems are designed to minimize the perceived burden of a given amount of tax liability.[87] The politics of income tax withholding in the United States suggest that remittance matters, as many conservatives dislike withholding because it reduces the visibility of tax collection and thus reduces the perceived cost of government. They prefer that employees, not employers, remit taxes every week or every month. Indeed, some legislators have introduced into Congress a bill entitled the "Cost of Government Awareness Act," which would eliminate withholding and instead require individuals to remit income taxes in monthly installments.[88] Likewise, the version of the Hall-Rabushka flat tax introduced as a bill by then-House Majority Leader Dick Armey eliminated employer withholding, which Armey referred to as a "deceptive device that has made big government possible."[89]

The remittance rules may also matter in the transition from one tax system to another. As an example, consider the consequences of abolishing a retail sales tax. If tax-inclusive prices were fixed in the short run, eliminating the retailers' requirement to remit would provide a windfall gain to their owners. If, alternatively, consumers had been the remitting party, they would gain if the tax-inclusive price stayed fixed. The transition gains and losses thus depend critically on the short-run flexibility of prices.

5. Applying the Least-Cost-Remitter Idea

a. Current Law: Tax Withholding, Sales Tax Remittance, and Gift Tax Liability

Our analysis provides an explanation for a number of aspects of current tax law in the U.S. and other countries and suggests some possible reforms. First, consider wage withholding for individual income taxes. From the perspective of our framework, imposing an obligation on the employer to withhold and remit taxes that are based on the overall income status of its employees is akin to vicarious employer tax liability. That is, except for the inherent distinctions already discussed between taxes and torts, wage withholding is similar in important ways to vicarious employer liability for the harms caused by employees. This analogy not only suggests a rationale for the current income tax withholding rules, but also provides an argument for a reasonable expansion of those rules – along the lines of expanded employer tort liability discussed above.

But first let us review the U.S. wage withholding rules in greater detail. Under the U.S. tax system, both the employers and the employees have remittance obligations with respect to the taxes owed on, or triggered by, an employee's income. The Internal

[87] This is discussed in Aradhna Krishna & Joel Slemrod, *Behavioral Public Finance: Tax Design as Price Presentation*, 10 INTERNATIONAL TAX AND PUB. FIN. 189 (2003).
[88] H.R. 1364, 107th Cong.
[89] Dick Armey, *Why America Needs the Flat Tax* in Robert E. HALL, ALVIN RABUSHKA, DICK ARMEY, ROBERT EISNER, AND HERBERT STEIN, FAIRNESS AND EFFICIENCY IN THE FLAT TAX 99 (1996) ("Only by taking people's money before they ever see it has the government been able to raise taxes to their current height without sparking a revolt.").

Revenue Code, for example, imposes on employers an obligation to "deduct and withhold" a given percentage of the employee's wages as "employment taxes," to hold these funds in trust for the U.S. Treasury (typically in a special account in a bank that is qualified to accept tax remittances), and then eventually to remit those funds to the government. Employment taxes include Social Security and Medicare taxes, federal unemployment taxes, and federal income taxes. With respect to the Social Security, Medicare, and unemployment taxes, the amounts to be withheld are strictly prescribed by law.[90] With respect to income tax withholding, although the employee has some say as to the amount that is withheld (through the filing of his Form W-4), the rules generally encourage withholding that approximates an individual employee's *overall* income tax liability. If the employee wants to withhold more than the minimal amount, she can do that as well, as many wage-earners do, and then file for a refund.

Once the employer withholds and subsequently remits the portion of the income tax liability for which it is responsible, the employee also has a separate legal responsibility to remit any income tax she owes in excess of the amount remitted on her behalf by her employer. That is, if the employer(s) withholds less than the full amount of income tax that the employee owes, the employee must then file a tax return by the filing deadline with a check for the difference. This is obviously what many individual taxpayers do every year when they send a check in with their 1040s each year. Of course, if an employer withholds and remits more in tax than is owed with respect to the employee's income, the government refunds the excess back to the employee. Thus both the employer and employee have a remittance responsibility with respect to the income tax triggered by an individual employee's income.[91]

Note that under current U.S. tax law, if the employer fails to withhold and remit the amount required by law from the employee's wages, the government can seek payment for that amount not only from the employer but also from the employee. Thus, as to the employer's remittance obligation, if the employer fails to withhold and pays the employee the pre-tax wage, the employer is the primary obligor and the employee is the secondary obligor. Thus, if the employer does not "deduct and withhold" the amount from the employee's pre-tax wages, that amount is not credited to the employee for

[90] In common parlance Social Security, Medicare, and unemployment taxes are typically described as being split equally between the employer and the employee – with the employer "owing" half of the tax and the employee "owing" the other half. However, an employer is required to remit both amounts, with the employee's portion being considered an amount deducted and withheld from the employee's wage. As long as the remittance burden for both amounts is placed on the employer, the two portions of these taxes have identical efficiency and distributional effects.

[91] Whenever there are dual remittance obligations of this sort, as compared with a system in which only one party has a remittance obligation, then there are obviously two sources (rather than one source) of remittance compliance costs. For example, if we simply eliminated the remittance role for employee/individual taxpayers and made no other changes (a system known as *final* withholding) , this would presumably reduce compliance costs compared with the dual remittance regime. And such a system might be optimal if society decided not to allow adjustments for the individual circumstances of employees (via various deductions and credits). Indeed, for some low-income taxpayers who have no itemized deduction and who work for only one employer, such a system would have much to recommend it, because of the savings in both compliance and administrative costs. If, however, society does want to allow individualized adjustments, a regime of dual remittance makes more sense.

purposes of her year-end remittance obligation.[92] In such a situation, however, if the IRS ultimately recovers the tax from the employer for the unwithheld taxes, the employer may then seek recovery of that amount from the employee.[93] The basis for the employer's claim against the employee would be contractual rather than statutory. That is, the employer implicitly agrees to pay the employee the post-withholding amount; therefore, if the employer fails to deduct and withhold, it has in effect overpaid the employee by the unwithheld amount and can, contractually, seek recovery for that amount – though perhaps unenforceable if the employee proves to be judgment-proof. This rule is akin to joint-and-several liability, in that the government can go after either the employer or the employee, with a right of contribution available to the employer if the government ends up collecting from it the unwithheld tax.[94]

Placing the initial remittance obligation on the employer makes sense from an efficiency perspective, both because the employer will generally be the lower-compliance-cost remitter of the tax (owing to the economies of scale of compliance discussed above) and because the employer will be the lower-enforcement-cost remitter (owing to the economies of scale of enforcement discussed above). Likewise, it makes sense to allow for recovery from the employee in those cases where the employee is most likely to have money with which to pay the tax (namely, where the tax has not in fact been withheld from the employee's wages).

Our framework would also help to explain the numerous tax withholding rules other than those for wage withholding. For example, under the Internal Revenue Code, there is withholding on tips (which are obviously akin to wages)[95] as well as on gambling winnings.[96] In both cases, it is easy to imagine a problem of either judgment proof taxpayers or taxpayers who are relatively costly for the tax enforcement authorities to pursue. Likewise, the rules requiring tax withholding by U.S. taxpayers on payments to foreign individuals or foreign firms can be seen not so much as a response to the problem of insufficiently capitalized taxpayers, but to the problem of missing (or beyond the reach of our government) taxpayers.[97] Indeed, other countries make even greater use of withholding regimes than does the U.S., often requiring payers to withhold and remit

[92] Church v. CIR, 810 F2d 19 (2d Cir. 1987) ; Goins v. CIR, 75 TCM (CCH) 1243 (1998) ; Edwards v. CIR, 39 TC 78 (1962), aff'd, 323 F2d 751 (9th Cir. 1963).

[93] BITTKER & LOKKEN, *supra* note __, at 111.5.

[94] It is not exactly like joint-and-several liability in practice. It is more like primary and secondary liability, as the Government always goes after the employer first for the amounts that were supposed to be withheld, and then would go after the employee only if that were unsuccessful. In contrast, with joint-and-several, the plaintiff can literally choose whichever joint tortfeasor it wants to go after.

[95] Tips present even bigger noncompliance problems than with wages generally. Indeed, tips are such a problem that the Code now requires large restaurants not only to withhold for tips, but also to report to the IRS for each member of their wait staff an allocated amount of the restaurant's overall revenue. See generally Yoram Margalioth, *The Case Against Tipping*, 9 U. PA. J. LAB & EMP. L. 117 (2006) (arguing in favor of moving towards service charges and away from tipping for a number of reasons, including concerns about tax evasion).

[96] See generally IRS, Publication 505, Tax Withholding and Estimated Tax, available on line at http://www.irs.gov/publications/p505/index.html.

[97] See generally IRS, Publication 515, Withholding of Tax on Nonresident Aliens and Foreign Entities, available on line at http://www.irs.gov/pub/irs-pdf/p515.pdf.

taxes on *domestic* interest and dividend payments as well as on payments to independent contractors of various sorts.[98]

Even some U.S. states require tax withholding in situations in which the U.S. federal tax law does not. For example, both Minnesota and Massachusetts require withholding for payments to certain types of independent contractors, which under U.S. federal tax law would not be subject to withholding. In Minnesota it is payments to certain construction-industry contractors,[99] and in Massachusetts it is payments to certain visiting performers and lecturers.[100] In both cases, it is clear that the concern is with the administrative cost of enforcing tax compliance with these groups of payees. Our framework suggests that, because of the incidence analysis discussed above, imposing the remittance obligation in all of these cases on the larger party (who is easier or cheaper to target with enforcement efforts) comes closest to efficiently achieving the policymaker's desired level of revenue subject to distributional considerations.

A similar story can be used to explain why governments that use retail sales taxes invariably assign the primary remittance obligation to the retail sellers rather than retail purchasers. There are obvious economies of scale to enforcing sales tax remittances against large retail sellers rather than against hundreds or thousands of individual purchasers. It would be the height of folly to insist on auditing every individual who makes a retail purchase at a Wal-Mart store in a given year rather than simply to audit the store itself. This is because, to apply our framework, Wal-Mart is obviously a lower-cost tax remitter than would be its customers. To illustrate the futility of imposing the retail sales tax remittance obligation on retail purchasers, consider the much-maligned "use" tax. When a consumer purchases goods by mail order, Internet, or otherwise from outside the state, the state government will often impose a so-called use tax (charged at the same rate as the retail sales tax) to be remitted by the purchaser if the seller does not remit the tax on the purchaser's behalf. Unsurprisingly, the compliance rate for such use taxes is generally thought to be close to zero.[101] Indeed, this is one of the reasons why more states are increasingly seeking to impose a sales-tax remittance obligation on online out-of-state retail sellers such as Amazon and iTunes, despite the potential constitutional objections.[102]

Another example of current tax remittance law that seems roughly consistent with the framework of this article is in the area of gift transfers. Gifts, whether *inter vivos* transfers or bequests, are not generally thought of as market transfers. Indeed, to be treated as a gift for tax purposes the transfers cannot be accompanied by the same sort of

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[98] Germany is one example. See JUHANI KESIT, EUROPEAN TAX HANDBOOK 245 (2006).
[99] Minnesota now requires taxpayers to withhold and remit taxes on amounts paid to certain contractors in the construction trade, if the total payments for the year are expected to exceed a certain threshold. Minnesota Statute Section 290.92, Subd. 31. For a description of this new rule (effective beginning January 1, 2009), see http://www.taxes.state.mn.us/taxes/withholding/tax_information/factsheets/wfs18_08.pdf.
[100] Massachusetts requires withholding and remittance for taxes on payments to performers, visiting lecturers, and the like. See generally http://www.mass.gov/Ador/docs/dor/Publ/PDFS/performers.pdf.
[101] See, e.g., Trymaine Lee, *State Steps Up Efforts to Collect a Sales Tax Owed by More in a Digital Age*, N.Y. Times, April 15, 2008 (Noting that "only 5 percent of the approximately 9.6 million residents who filed [New York] state income tax returns for 2006 listed anything owed" on the line for the use tax on their returns.)
[102] Sewell Chan, *The "Amazon Tax" and the "iTunes Tax" Compared*, N.Y. Times, Dec. 18, 2008.

quid pro quo normally associated with market exchange. Therefore, it could be argued that TRIPs would have no application to the gift context. On the other hand, it is not unusual to think of gifts as involving some element of reciprocity, and economists have usefully modeled gifts and bequests as a type of exchange, with the donor expecting something in return from the donee, albeit not necessarily as a result of any explicit contract. In any event, it would not stretch the underlying idea of TRIPs beyond recognition to apply it to the gift/bequest context and thus to argue that, under traditional (extreme) Coasean and TRIPs assumptions, the assignment of the gift/bequest tax remittance obligation should not make a difference. Either way, the donor will adjust the amount of the gift to achieve a given desired amount of after-tax transfer to the donee. Likewise, an application of this Article's framework would suggest that, insofar as there are differential compliance and administrative costs, the assignment of gift/estate tax remittance responsibility may matter. The choice of the optimal assignment of that responsibility would depend on the answer to the question we have repeatedly posed: what assignment of tax remittance liability achieves the desired revenue raising and distributional goals at the lowest combined administrative and compliance costs?

Under current U.S. tax law, the initial or primary tax remittance obligation rests with the giver or the estate. The amount of the tax is determined by the amount of the donor's tax base (total gift transfers less various deductions less a lifetime unified credit) times the applicable rate structure, which is fairly progressive. Once the donor has given more than the excluded amount, the unified gift/estate tax kicks in, and the donor must remit the tax. Of course, we could imagine a system where the amount of tax was calculated in exactly the same way, but the remittance obligation would be assigned to the donee. Indeed, under current law, the donee is secondarily liable for the gift/estate tax, for which the donor is primarily liable. This is not joint and several liability, but rather primary and secondary liability. That is, if the donor does not pay the liability, the donee must pay it. This primary/secondary assignment of tax liability is entirely a question of remittance obligation. Either way, the amount is a function of the base of total gifts and bequests that exceed the exemption. (Thus, as we have already emphasized, the calculation of the amount of the tax can be divorced from the question of remittance obligation.) By contrast, if the amount of the tax were calculated by reference to the donee's tax base (say, by including the gift/bequest in the donee's gross income), we could likewise imagine various alternative assignments of the remittance responsibility: primary liability for the donee with secondary liability for the donor; the reverse; joint and several liability; several liability; and so on. Whatever the remittance assignment, however, the amount of the tax would be the same – and, presumably, whatever the remittance responsibility, we would call this an inheritance tax rather than an estate tax.

The framework of this Article suggests that, whatever base is chosen, the remittance obligation ought to be designed to, ceteris paribus, minimize compliance and administrative costs. Given the choice of the tax base under current law, the current assignment of remittance responsibility seems reasonably sensible. The idea presumably is that donors, or their fiduciaries, generally are the lowest compliance cost remitters, which would indeed be so in many cases. Think of a large estate that pays out sums to many different beneficiaries; in such a case, compliance and administrative costs could presumably be minimized by assigning initial primary remittance liability on the donor.

The remittance by the estate in that case can even be thought of as a sort of withholding regime.

Also consistent with our least-cost-remitter rationale is the fact that the remittance responsibility under U.S. income tax law, as well as under ever other tax regime we are aware of (including various forms of consumption tax), is largely nontransferable. That is, tax laws generally do not allow Coeasean bargaining with respect to who has the tax remittance obligation. Put differently, the parties to the transactions that trigger taxation are not generally allowed to elect which of them will be responsible for remitting the tax. There are some exceptions to this rule. As mentioned above, individual employees can submit W4 forms requesting the employer not to withhold any tax from their checks, but this will be largely ineffective. The IRS will scrutinize such requests closely and will not permit such an allocation of remittance responsibility solely to the individual employee if it appears to be abusive. Why not? For just the sort of enforcement-cost reasons that we have been discussing, which are analogous to the concerns about strategic judgment-proofing from the tort context. That is, if buyers and sellers were allowed to engage in Coasean bargaining over the allocation of the tax remittance responsibility, there would be an incentive for them to allocate that responsibility not necessarily to the one with the lowest compliance costs (which would be socially optimal) but to the one with the best chance of evading the tax – and thus the party for whom the government's cost of enforcing a given tax liability is highest. Using the modified Calebreisan language, they would not necessarily choose the least-cost harm avoider, but would also consider who is the least-cost liability avoider, which is the highest-enforcement-cost remitter. This sort of bargain would be joint-wealth maximizing for the parties involved, but may not be socially optimal. Hence, it is no surprise that tax remittance obligations are not generally made transferable. (Indeed, if they were transferable, one can imagine that retail sellers would seek quickly to shift the remittance responsibility for the sales tax from themselves to their customers, many of whom would have an incentive happily to accept that responsibility, just as they do the – effectively unenforceable – remittance obligation for the use tax.)

b. **Potential Reform: Expanding the Remittance Role of (Large) Employers/Payers**

As discussed in the previous section, U.S. tax law imposes on employers not only the obligation to submit information returns to the IRS regarding the wages they pay their employees (i.e., Form W-2s, which include information about the amount paid and the identity of the payee) but also the obligation to withhold and remit taxes on those wages. By contrast, with respect to payments made to independent contractors (ICs), although there is a reporting obligation (Form 1099s, requiring information similar to W-2s), the remittance obligation rests with the payee rather than the payer. Why the different treatment for ICs? Under the framework of this article, the assignment of remittance responsibility to ICs rather than employers has some initial plausibility if we consider only compliance costs. In many situations, as between employers and their ICs, the latter would incur lower overall compliance costs. This is because, unlike employees (who tend to work for relatively few employers, usually a single employer), some independent contractors often work for multiple employers. Thus, rather than require multiple employers to gather the same information on the same contractor (i.e., all of the

information provided on the Form W-4 that enables the withholding amount to be tailored to the circumstances of the individual), it minimizes compliance costs in those cases to let the contractor sort out its own tax remittance obligations.

This does not mean, of course, that the employer/payer is given no tax compliance-enforcement role with respect to independent contractors. The filing of information returns with the IRS lowers the cost of enforcing the tax laws against the contractors, by giving the Service a means of cross-referencing returns to ensure proper remittance. Thus, in theory, the line between employees and independent contractors could be appropriate in that it allows the remittance obligation to be assigned to the least-cost remitter while imposing a reporting obligation on payers as a means of keeping the tax remitters honest.

But that is not the end of the story. First, contractors will sometimes have a higher compliance cost than will employers. This could be the case, for example, when the contractors work for only one employer (or only a few employers) and happen to be classified as an independent contractor merely because of the definition of that status. Also, if the employer is significantly larger than the contractor, there would be economies of scale of the sort described above to placing remittance responsibility on the employer. In addition, for the reasons already discussed, the *administrative* costs of enforcing remittance compliance against ICs, especially small ones (most especially self-employed individuals), turns out to be very high; and this may be true *even with information reporting from the payers*. With small independent contractors, especially those who are self-employed individuals who work for larger companies but happen to have independent contractor status, there is a significant possibility of judgment-proofness. In such cases, even the filing of an accurate Form 1099 by the employer will not ensure compliance. That is, insofar as the worker is judgment proof, an increase in information reporting does not reduce administrative costs. For those individuals, then, the fact that their payments are not called "wages" does not diminish the concern that led to the adoption of a pay-as-you-earn wage withholding in the first place. For these reasons, assigning the remittance obligation to contractors rather than to employers has the potential to result in substantial tax evasion (with all of the efficiency and distributional consequences that such evasion implies) or, if the government decides to crack down, very substantial enforcement costs.

This is not a hypothetical problem. By far the largest source of tax noncompliance in the U.S. lies with self-employed taxpayers. Evidence from the IRS National Research Program for tax year 2001 shows a huge variation in the rate of misreporting as a percentage of actual income by type of income or income offsets (such as deductions). For example, only one percent of wages and salaries, and only four percent of taxable interest and dividends, go unreported. Of course, wages, salaries, interest, and dividends must all be reported to the IRS by those who pay them; in addition, wages and salaries are subject to employer withholding. Self-employment business income, by contrast, is subject to relatively little information reporting, and the estimated noncompliance rate for that sort of income is sharply higher. An estimated 57 percent of non-farm proprietor income (which includes independent contractors) is not reported, which by itself accounts for more than a third of the total estimated underreporting for the individual income

tax.[103] Over half of the individual income tax underreporting gap is attributable to the underreporting of business income, of which non-farm proprietor self-employed income is the largest component.[104]

Of course, some significant fraction of this self-employed tax gap is attributable to individuals (or small-scale businesses involving several individuals) who sell goods or services directly to retail consumers. For noncompliance in those settings, there are serious limitations on what the law can do by way of either altering the remittance obligations or introducing new reporting requirements. The compliance and administrative costs of requiring individual consumers either to withhold and remit or even to file information returns on consumption expenditures for federal income tax purposes would obviously be prohibitive. (Again, this is why retail sellers rather than purchasers are generally required to remit state retail sales taxes.) However, in those cases in which self-employed individuals (or even small businesses that involve more than one individual) work for a single – or for relatively few – business employers *and* they happen to be characterized as independent contractors under the common law definition used by the tax law, there may be some potential efficiency and distributive advantages to a change in remittance law.

Specifically, a good case can be made for expanding the withholding and remittance obligation to include payments by (relatively large) businesses to (relatively small) independent contractors.[105] The obvious benefit of such a rule would be essentially the same as wage withholding and remittance: to improve compliance or, alternatively, to reduce the administrative cost of achieving a given level of compliance. That is, the pay-as-you-earn concerns that motivated the adoption of wage withholding in the first place apply just as much to payments to individual or small-scale business contractors as they do to wage earners.[106] Such proposals have been made before. For example, the General Accounting Office in 1992 issued a report calling for, among other things, a new system

[103] Data available at http://www.irs.gov/pub/irs-news/tax_gap_figures.pdf.

[104] Id. What these data do not reveal is what fraction of the non-farm proprietor income derives from self-employed individuals, for whom the judgment proof and pay-as-you-earn arguments are strongest, and what fraction derives from relatively large (non-judgment-proof) independent contractor businesses. For the latter category of taxpayers, it could be argued that, rather than impose a new remittance obligation on employers, the more efficient overall response to noncompliance would be to increase information reporting on the part of employer-payers, perhaps by increasing penalties for non-filing of 1099s.

[105] Note the similarity of this to the practice in some countries of requiring sales tax to be remitted by certain parties in conjunction with certain purchases from small businesses, on the grounds that these payments presumably reflect or indicate taxable income of the recipient. In a few cases, there is "reverse" withholding, under which tax must be remitted in conjunction with certain *sales* to small business taxpayers. Here the link to income is less direct, although arguably there is an indirect relation, if the transaction is expected to result in taxable profits, as when importers, wholesalers, or retailers, purchase goods for resale. Similarly, as mentioned in the text above, some countries require withholding and remittance by payers on payments to independent contractors. See Kesti, European Tax Handbook, supra. These withholding remittances can in principle be credited against the income tax liability of the small businesses, but the presumption is that these businesses often are not in the tax net, i.e., are not filing tax returns and remitting any tax liability. Countries that require withholding on payments to certain businesses usually exclude as withholding agents individuals in their capacity as consumers and small businesses because they are too numerous and otherwise not suitable as withholding agents.

[106] Under current law, payments to corporations are not subject to withholding, but obviously that rule would have to be changed, lest taxpayer-payees get around the requirement simply by incorporating.

of non-wage contractor withholding.[107] Most recently, the Office of the National Taxpayer Advocate, which identified the underreporting of self-employment income as one of its primary areas of concern (listing only the AMT as a larger tax-related problem for U.S. taxpayers), recommended contractor withholding, with specific withholding percentages to be set, by Congress or the Treasury Department, for different categories of contractor-payees.[108] Such a change would obviously have some disadvantages, as the compliance costs might be too large for relatively small business payers, which is why there should be an exception for businesses below a given size. Of course, contractor compliance could be improved and enforced costs reduced also by strengthening the rules regarding information reporting, such as by increasing the penalties for failure to report. However, to the extent that many self-employed individuals will be either judgment proof or otherwise relative expensive to prosecute, some version of contractor non-wage withholding may make sense.

One important implication of our analysis is that, if a contractor withholding regime were adopted, it should not be made elective, just as the assignment of tort liability among various joint tortfeasors should not be elective. That is, contractor withholding is another one of those areas where Coasean bargaining would tend to exploit externalities rather than internalize them, as the parties would have an incentive to assign the remittance obligation to the least-cost liability avoider rather than to the lowest-compliance cost remitter. Indeed, under current law, it would be possible for businesses and their contractors to enter into voluntary withholding arrangements whereby the businesses agreed to withhold and remit on their contractor payments.[109] But it should come as no shock that such agreements have not become the norm for contractor payments.

An alternative to introducing contractor withholding would be for Treasury to be empowered to define and police the doctrinal boundaries between employees and independent contractors. As the law presently stands, the distinction depends on the common law definition derived from agency law, which, though possibly useful in the tort context, proves to be unhelpful in the tax context. A better way to draw the line would be to impose the remittance obligation on the party who is likely to produce the lowest combination of compliance and administrative costs. For the reasons already discussed, that will usually be the employer in cases in which the employer is a large corporation and the worker is an individual (or even a small firm). Drawing the optimal line between employer remittance and independent contractor remittance would require careful study of the relative compliance and administrative costs. This is just the sort of job that would normally be assigned to the Treasury Department, which could be tasked with designing regulations that would make structure optimal remittance obligations. Unfortunately, as a result of section 530 of the Revenue Act of 1978, the Treasury

[107] General Accounting Office, Tax Administration: Approaches for Improving Independent Contractor Compliance (July 23, 1992).
[108] The report suggests starting with a withholding rate of 3.5 percent on payments to independent contractors who generally maintain "an inventory or receiving payments for materials and supplies" and 5 percent for contractors who do not, but then allowing the Treasury Department to determine appropriate contractor withholding rates for different categories of contractors based on the average costs of doing business in those areas. Similar proposals have been floated before. See, e.g., 1992 GAO report.
[109] See I.R.C. section 3402 (authorizing such agreements).

Department is prohibited from publishing regulations and revenue rulings with respect to the employment status of any individual for purposes of the employment taxes.[110] One concrete recommendation that flows from our analysis is that this prohibition should be lifted and the Treasury Department should be allowed to draw a line between employer remittance and worker remittance that makes tax policy sense – that minimizes overall compliance and administrative costs.

c. The Limits of Vicarious Employer Tax Liability: Scope of Employment

In the preceding analysis, we have borrowed ideas from the literature on vicarious tort liability to suggest ways in which an analogous efficiency argument can be used to justify what amounts to vicarious employer tax liability for the taxes owed by employees. That is, because of the asymmetric cost of enforcing tax remittance obligations imposed on workers (at least when the workers are individuals – whether employees or independent contractors – or small companies and the employers are relatively large companies), an efficiency story can be told for placing the remittance obligation on the employer rather than on the worker. (As we have emphasized, this fact is inconsistent with the tax remittance invariance propositions that are conventional wisdom among economists.) Here we discuss whether this idea of vicarious employer tax liability should be limited by a tax version of the scope-of-employment doctrine.

Recall from the discussion in 3.c. above the nature of the scope-of-employment doctrine in tort law: It says that employers can be held vicariously and strictly liable for the torts of their employees only insofar as those workers commit torts within the scope of their work for the employer. The efficiency justification for the rule is that the employer is not the best insurer of the employee's non-job-related liabilities; and imposing those costs on employers would inefficiently reduce the scale of the employer's enterprise. The counter-argument is that perhaps the employer might be, in some cases, the best insurer of such risks and might even be, if not the cheapest-cost harm avoider, someone who is in a position to "bribe" the cheapest-cost harm avoider (probably the worker) to do just that—avoid the harm.

What would the tax analog of vicarious tax liability with a scope-of-employment limitation look like? It might look very much like the current system for withholding and remittance for Social Security, Medicare, and unemployment insurance taxes. For those taxes, the employer is required to withhold and remit an amount that is calculated based exclusively on the wage paid by that employer to that employee.[111] Thus, in a sense, those tax remittances are presently limited to the scope of employment, as they is calculated by applying the relevant rates exclusively to the wages paid by the employer with the remittance responsibility. As a result, if a worker receives wages from more than one employer, each employer is responsible for remitting (only) the employment taxes that are attributable to the wage that they pay that worker.

[110] Rev. Rul. 87-41, 1987-1 C.B. 296 (providing guidance with respect to section 530 of the Revenue Act of 1978).

[111] A portion of the tax is formally "owed" by the employer and a portion is "owed" by the employee. However, the employer is responsible for remitting both parts of the tax on behalf of its employees.

What would the tax analog of vicarious tax liability *without* a scope-of-employment limitation look like? Interestingly, it might look something like the current rule for income tax withholding in the U.S. With income tax withholding, the idea is that, in most cases, the employer will withhold and remit enough money to cover the individual taxpayer's entire income tax liability, not merely the income tax liability generated by the wage paid to that employee by that employer.[112] In general, as a first approximation, the law allows employers to withhold in income tax the amount that their employees tell them to withhold, that is, whatever amount is determined by the employee's Form W-4, which lists the number of exemptions to be used in calculating the withholding amount. Indeed, an employee can request that no income tax whatsoever be withheld. However, if the withheld amount proves to be too low (and does not at least approximate the employee's overall tax liability), the IRS has the power to send the employer what is called a "lock-in" letter, which will require the employer to withhold an amount that more closely approximates the employee's true tax liability. If the employer fails to enforce the lock-in withholding amount, the IRS will collect the difference from the employer.[113] Indeed, the lock-in withholding amount probably often results in overwithholding and the need for the employee to file for a refund.

Of course, employees who have both employment income and non-employment (or self-employment) income can avoid the compulsory lock-in withholding by simply filing estimated tax returns and remitting the tax liability triggered by the other income. But they have to pay the extra tax. What the employer and employee cannot do – at least not without the possible consequence of the lock-in letter – is to collude (in one of those nefarious Coasean tax externalizing transactions) to shift all of the remittance responsibility to the employee, who then fails to pay the tax. The combination of information reporting (on Form W-2s) and lock-in letters deter this possibility. The key observation is that, under present withholding regulations with respect to federal income tax withholding, the general rule is that employers are expected to remit (i.e., are held vicariously liable for) tax owed by the employee not only on income triggered by the work with the employer but also from income generated outside of the employment context – unless the tax on other income is paid via separate estimated tax payments. And this regime is considered neither controversial nor unusual, even though it is a form of expanded—and vicarious—employer tax liability.

d. In Rem Taxation

[112] Taxpayers are encouraged to submit W4 forms that fine-tune the exemptions so that this result is approximately achieved. For example, on the IRS web page, there is a withholding calculator that takes the employee-taxpayer through a number of questions designed to help him arrive at a withholding amount that approximates not merely the tax triggered by the wages paid by the employer, but the overall likely tax liability of the employee-taxpayer from all sources. http://www.irs.gov/individuals/article/0,,id=96196,00.html. For taxpayers who have employed spouses, the IRS web page suggests that the online calculator will produce only a approximation of the appropriate tax remittance. Of course, as with the Form W4, the answer produced by this calculator is relatively easy to manipulate simply by inflating the number of dependency exemptions. However, as discussed in the text immediately below, the law has ways of policing such abuse.

[113] Internal Revenue Service, Withholding Questions and Answers, Question 6 (available at http://www.irs.gov/individuals/article/0,,id=139412,00.html).

To this point we have been focusing on the tax remittance analog to tort liability, and for the most part we have been concentrating on income taxes, with some discussion of sales or other consumption taxes. Turning briefly now to property taxes, we see an example of a very different sort of remittance regime, but one that has obvious Coasean roots: *in rem* taxation – or taxation "against the property." All individual and sales taxes are, in the first instance, *in personam* liabilities in the following sense: They are initially enforceable against the person who is the remitter (or, if there are multiple or overlapping remittance obligations, enforceable against the remitters). Of course, even with income taxes, if the person with the remittance obligation fails to remit, the taxing authority can convert that personal liability into a claim against taxpayer's personal and real property – an *in rem* liability.[114] With an *in rem* tax liability, as with any *in rem* liability, the obligation "runs with the land." Thus, if the property is transferred and the *in rem* tax liability has not been satisfied, that liability follows the property; and the party to whom the *in rem* liability is owed, here the government, has the power to force a foreclosure sale to satisfy the obligation. One difference between an *in rem* and an *in personam* liability is that if an individual who is personally liable goes through a personal bankruptcy proceeding, her *in personam* liabilities will be eliminated; whereas, *in rem* liabilities, again not being personal liabilities, remain enforceable. Thus, the remedy that is available to the *in rem* creditor, here the government, would be seizure and sale of the property.

How are these *in rem* tax liabilities enforced? Normally the taxing authority will have on file the name of one party who is primarily responsible for remitting the tax, the party to whom the periodic tax bill is sent. This is usually the owner of the property. If the owner fails to pay the tax, the tax collector can then initiate steps to foreclose on the property. Notice may also be sent to other parties with an interest in the property, who may have the option to pay the delinquent tax and assume ownership of the property. In any event, as the foreclosure process goes forward, all parties with a financial interest in the property become aware of that fact. And through a public auction, the property will eventually end up in the hands of the highest-valued user.[115]

What does all of this have to do with optimal tax remittance policy? In fact, *in rem* tax liability amounts to a sort of modified joint-and-several liability for the tax that is attributable to a given piece of property. That is, the tax collector (like the tort plaintiff) can in effect bring its cause of action against any party with an interest in the property in question, whichever one has the deepest pocket or is otherwise easiest, or cheapest, to identify. *In rem* tax liability, of course, is not exactly like joint-and-several liability,

[114] In fact, as mentioned in note __ above, with U.S. federal income, gift, or estate taxes, the U.S. government automatically receives a lien against *all* the assets of a taxpayer if the taxpayer does not pay the taxes upon "demand." IRC § 6321.

[115] As John Youngman explains, two of the consequences that may be intended by terming a tax *in rem* are (i) that assessments may name the property but not rely on the identification of the owner to establish tax liability, so that publication may be deemed to notify all interested parties of this claim, and (ii) there may be a corresponding absence of personal liability, the remedy for nonpayment being limited to seizure and sale of the property itself. See Joan Youngman, *Tax on Land and Buildings*, in Tax Law Design and Drafting (1996) (Victor Thuronyi, Ed.). Youngman counsels against *in rem* taxes that limit the liability, and favors listing as liable for remittance obligation anyone "owning, claiming, possessing, or controlling" an interest in the property on the lien date. This language is taken from Cal. Rev. and Tax. Code §405.

since none of the potential remitters (and potential owners of the property) would be held personally liable. However, because of their financial interests in the tax-encumbered property, they would have an incentive, at least to the extent of their financial stake, to pay the outstanding tax liability. The protection in this situation against potentially judgment-proof taxpayers, of course, is not their personal deep pockets, but the value of the property subject to the tax liens. Thus, *in rem* tax liability provides an alternative to deep-pocket vicarious tax liability as a response to the sorts of compliance obstacles we have been discussing. What's more, as we have noted, this sort of *in rem* liability is in fact already present not only for local property taxes, but also for federal income taxes, in circumstances in which the taxpayers in question have assets that can be attached.

6. Conclusions

Two venerable but heretofore parallel scholarly traditions, tax remittance invariance propositions and Coasean variance and invariance assertions in a market context, share much in common. In both settings an equilibrating price will determine which side of the market bears the costs, either of a harm or a tax obligation, and in both settings there is the possibility of "off-market" negotiation that will reach private-cost reducing agreements.

The two traditions differ in the centrality for the TRIPs of the enforcement of remittance obligations by the government. In contract law, for example, the presumption that maximizing joint benefit is efficient presumes that there are no third parties involved, but introducing a third party is not central. In tax the third party (the government, as an agent for all citizens) is central, and in particular bargains that reduce joint compliance costs may, by increasing the enforcement costs of raising revenue, not be socially optimal. To clarify that difference, we introduce the semantic distinction between the least-cost *harm* avoider, a modification of a standard term in tort analysis that corresponds to tax compliance costs, and the least-cost *liability* avoider, which is critically important in tax because the private cost saving due to evasion of tax liability does not correspond to a social cost saving, and in fact entails *additional* enforcement costs.

This new framework allows us to make a number of observations about current tax remittance law and some tentative suggestions about potential reforms. The assignment of the remittance burden to employers rather than employees and to retail sellers rather than consumers are obvious examples of placing tax liability on the least-overall-cost tax remitter. Our emphasis on remittance regimes is not meant to diminish the importance of information reporting. However, in some situations – where pay-as-you-earn (judgment proof) or "missing taxpayer" concerns are high – information reporting alone will not be enough, and just as the judgment proof problem may justify vicarious liability in tort, a related phenomenon may suggest the need for a sort of vicarious or joint tax liability in some settings. Indeed, we argue that this idea could be taken further than it has been, for example, with the introduction of withholding for payments to contractors – a reform that would directly respond to what is by far the largest source of tax noncompliance under the U.S. tax laws: under-reporting of self-employed and small business income.